POTOKAR, Adolf, ing.

Analysis of problems connected with a very high electronic stabilization of monophase voltage. II. (Conclusion). Elektr vest 27 no.11/12: 377-385 N-D '59. (EEAI 10:1)

1. Tovarna elektrotehnicnih in finomehanicnih izdelkov "Iskra," Kranj.
(Voltage stabilizers)
(Electronic equipment)

POTOKER, A.B.

Forecasting the provision of heat and the continuation of the vegetation of stubble corn crops. Meteor. i gidrol no.2:30-36 F '63. (MIRA 16:2)

1. Odesskiy gidrometeorologicheskiy institut.
(Corn (Maize)) (Crops and climate)

POTOKER, A.B.

Calculation of the amount of rainfall for the postharvest and stubble corn crops in the southern Ukraine. Meteor. i gidrol. no.6:31-33 Je '65. (MIRA 18:5)

1. Odesskaya agrometeorologicheskaya stantsiya.

POTOKER, A.B.

Agrometeorological conditions for growing corn as a stubble crop in the south of the Ukrainian S.S.R. Meteor. i gidrol. no.3: 21-26 Mr '62. (MIRA 15:3)
(Ukraine--Corn (Maize)) (Meteorology, Agricultural)

BLOKH, E.L., inzh.; POTOKER, I.M., inzh.; ROMANOV, G.I., inzh.; KHRENOV, G.S., inzh.; DANILOV, P.P., nauchnyy red.; RYAZANTSEVA, L.I., red.; TARKHOVA, K.Ye., tekhn. red.

[Safety instructions for insulation work and the manufacture of materials at production bases] Instruktivnye ukazaniia po tekhnike bezopasnosti pri proizvodstve teploizoliatsionnykh rabot i izgotovlenii materialov na proizvodstvennykh bazakh. Moskva, Gosstroiizdat, 1963. 102 p. (MIRA 16:9)

1. Russia (1917- R.S.F.S.R.) Ministerstvo montazhnykh i spetsial'nykh stroitel'nykh rabot. Tekhnicheskoye upravleniye. (Insulating materials) (Industrial safety)

TEREMYAZEV, G., inzh.; GLEBOV, V., inzh.; LUZANOV, B.; MEDNIKOV, V.; GURMAN, V., inzh.; SHAPKHOV, A., inzh.; KOZLOV, N.; KULIK, B.; PETROV, N., inzh.; POTOKIN, A., master po pnevmopriboram

Exchange of experience. Avt. transp. 43 no.9:49-53 S '65. (MIRA 18:9)

1. Tashkentskiy avtobusnyy park No.2 (for Potokin).

BUDNIKOV, A., inzh.; OSADCHIY, F., inzh.; POTOKIN, A.; DMITRIYEV, A., inzh.; BRUZH, R.; YELIZAR'YEV, B.

Exchange of experience. Avt.transp. 42 no.2:47-50 F '64.
(MIRA 17:3)

POTOKIN, A., master

Operational testing of the MKZ-B-9B fuel pumps in Central Asia. Avt.transp. 40 no.11:43 N '62. (MIRA 15:12)

1. Karbyuratornyy tsekh 2-go Tashkentskogo avtobusnogo parka.

(Fuel pumps--Testing)

POTOKIN, A.A.

Signaling of switch section clearance by the tail end of a train.
Avtom., telem. i sviaz' 7 no.12:31-32 D '63. (MIRA 17:4)

1. Starshiy elektromekhanik, Mineralovodskaya distantsiya signalizatsii i svyazi Severo-Kavkazskoy dorogi.

POTOKIN, A.F.

Unified devices for the fuel system of motor-vehicle engines.
Avt. prom. 30 no.6:11 Je '64. (MIRA 17:12)

1. Tashkentskiy avtobusnyy park No.2.

SLABKINA, A.I.,kand. sel'khoz. nauk; FIRSOVA, T.N., kand. sel'-khoz. nauk; POTOKIN, V.P., kand. sel'khoz. nauk; VOLKOV, G.K., kand. vet. nauk; SHKUDOVA, R.I., red.

[Principles of animal husbandry] Osnovy zhivotnovodstva. Moskva, Kolos, 1964. 263 p. (MIRA 18:11)

POTOKIN, V. P.

Cand Agr Sci - (diss) "Milk and meat productivity of mixtures of the first generation obtained from crossing black-speckled cows with Dzherseyskiye bulls in the "Klement'yevo" Sovnarkhoz of Moscow Oblast." Moscow, 1961. 21 pp; (All-Union Scientific Research Inst of Animal Husbandry); 200 copies; price not given; (KL, 7-61 sup, 252)

L 7725-66 EWT(1)/EPA(n)-2/ETC/EPF(n)-2/EWG(m)/EPA(w)-2/EWA(m)-2 IJP(c)

ACC NR: AP5025899 GG/AT SOURCE CODE: UR/0057/65/035/010/1848/1852

44,55 44,55 44,55

AUTHOR: Potokin, V.S.; Rakhovskiy, V.I.; Tikhonov, V.N.

44,55

ORG: All-Union Electrotechnical Institute im. V.I.Lenin (Vsesoyuznyy elektrotekhnicheskiy institut)

TITLE: Investigation of electrode erosion in the bridge stage when breaking 1 to 5 kA currents in vacuum

SOURCE: Zhurnal tekhnicheskoy fiziki, v.35, no. 10, 1965, 1848-1852

21,44,55

TOPIC TAGS: circuit breaker, vacuum, vacuum arc, electrode, tungsten, ionized plasma

21,44,55

ABSTRACT: Earlier investigations of one of the authors (V.I.Rakhovskiy. ZhTF, XXXIV, vyp. 11, 1964) of a heavy current vacuum circuit breaker, with particular reference to the stage in which a bridge of molten metal forms between the separating electrodes, have been extended to higher currents (up to 5 kA). The experimental technique was similar to that previously employed: cylindrical tungsten electrodes were rapidly separated, the voltage across the gap was observed with an oscilloscope, and the loss of electrode material was estimated by weighing tantalum foils that had been mounted near the gap. It was not possible to interrupt the discharge at any desired stage. It was found, however, that the loss of electrode material was always proportional to the duration of the arc stage of the discharge. From this it is concluded that in

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breaking currents up to 5 kA the loss of electrode material due to formation of a liquid bridge is negligible compared with the total electrode erosion. The voltage drop during the bridge stage rose considerably when the current was increased beyond about 3 kA. As a result of the increased Joule heat the bridge material presumably became very hot (temperatures up to 14 800 °K are estimated), and a mass of highly ionized plasma was formed. The authors call this highly ionized plasma joining the electrodes the "anomalous bridge". Spontaneous explosive formation of an anomalous bridge with consequent spontaneous separation of the electrodes was sometimes observed. There is a brief theoretical discussion of the formation and vaporization of the bridge. It is concluded that in breaking currents of 2 to 5 kA there is formed between tungsten electrodes a mass of highly ionized plasma, that the mass of material eroded from the electrodes during the bridge stage exerts no appreciable influence on the duration of the subsequent vacuum arc, and that in designing high current vacuum circuit breakers one must take measures to avoid spontaneous separation of the electrodes. Such measures might be to increase the contact pressure or to employ softer electrode materials. Orig. art. has: 6 formulas and 4 figures.

SUB CODE: EE, EM, ME/ SUBM DATE: 11Nov64/ ORIG REF: 003/ OTH REF: 003

Card 2/2

POPOV, Nikolay Aleksandrovich; POTOKIN, V.S., red.

[Vacuum switches; their present state and perspective development] Vakuumnye vykliuchateli; sostoianie i perspektivy razvitiia. Moskva, Energiia, 1965. 111 p. (MIRA 18:6)

LUKATSKAYA, I.A.; POPOV, N.A.; POTOKIN, V.S.; TYULINA, M.A.

Power vacuum arc-arresting chamber. Biul.tekh.-ekon.inform. Gos.nauch.-issl.inst.nauch. i tekh.inform. no.3:48-50 '63. (MIRA 16:4)

(Electronic tubes)

POTOLEA, E.

Extension of the utilization limits of direct-current network computation table models. p. 150.

ENERGETICA. (Asociatia Stiintifica a Inginerilor si Techicienilor din Rominia si Ministerul Energiei Electrice si Industriei Electrotahnice) Bucuresti, Rumania. Vol. 7, no. 3, Mar. 1959.

Monthly List of East European Accessions (EEAI) LC, Vol. 8, no. 8, Aug. 1959.

Uncl.

POTOLEA, E

TECHNOLOGY

PERIODICAL: ELECTROTEHNICA, Vol. 6, no. 11, Nov. 1958

POTOLEA, E. Synchonous machine with apparent poles, a nonsymmetric element of electric networks. p. 407

Monthly List of East European Accessions (EEAI) LC Vol. 8, No. 4
April 1959, Unclass

POTOLEA, Eugen

An original method for the simultaneous determination of longitudinal and transversal reactances of the synchronous machine with salient poles. Bul Inst Politeh 25 no.3:133-148 My-Je '63.

1. Chair de Reseaux electriques, Institut Polytechnique de Bucarest.

L 63703-65 EWT(d) IJP(c)

ACCESSION NR: AP5022056 RU/0004/64/000/012/0445/0457

AUTHOR: Potolea, E. (Candidate of technical sciences, Engineer, Lecturer)(Bucharest)

TITLE: Some methods for solving the matrix equations of electric networks

SOURCE: Electrotehnica, no. 12, 1964, 445-457

TOPIC TAGS: electric network, mathematic matrix, mathematic transformation

Abstract [Author's English summary modified]: The author develops some novel relations for the case of networks with currents at the nodes by using the basic methods of solving the network equations, namely the method of potentials at the nodes, the node-pair method and the cyclic current method. He also discusses the network transformation method, emphasizing the existence of two categories of transformations --topological and functional-- and showing that in the initial and transformed networks the maintenance of the source power is not a necessary condition of transformers.

Orig. art. has : 11 figures, 49 formulas, 3 tables.

Card 1/2

L 63703-65

ACCESSION NR: AP5022056

ASSOCIATION: Institutul politehnic, Facultatea de energetica, Catedra retele electrice, Bucharest (Department of Electrical Networks, Power Faculty, Polytechnical Institute)

SUBMITTED: 25Jul64 ENCL: 00 SUB CODE: EE,MA

NR REF SOV: 001 OTHER: 014 JPRS

Card 2/2 dm

L 63735-65

ACCESSION NR: AP5022209 RU/0004/64/000/011/0405/0412

AUTHOR: Potolea, Eugen (Candidate of technical sciencee, Engineer, Lecturer) (Bucharest)

TITLE: Matrix equations of electrical networks

SOURCE: Electrotehnica, no. 11, 1964, 405-412

TOPIC TAGS: electric network, mathematic matrix, graph theory, topology

ABSTRACT: The working equations of electrical networks are written by means of the incidence matrixes from the graph theory. Different forms of the topological equations are derived, and some novel forms are presented and used to analyze electrical networks with currents at the nodes. Orig. art. has 1 figure, 30 formulas and 4 tables.

ASSOCIATION: IPB, Catedra Retele electrice (Department of Electrical Networks, IPB)

SUBMITTED: 25Jul64 ENCL: 00 SUB CODE: EE, MA

NO REF SOV: 001 OTHER: 013 JPRS

Card 1/1

BARTFAI, Bela. TEREKHOV, V.F., inzh. [translator]; POTOLITSYN, B.A., inzh. [translator]; KUPTSOV, I.I., inzh., red.; STROGANOV, L.P., red. izd-va; TIKHANOV, A.Ya., tekhn. red.

[Handbook on electroplating; translated from the Hungarian] Spravochnik gal'vanostega. Moskva, Mashgiz, 1960. 396 p. (MIRA 14:12)
(Electroplating)

POTOLLOV, S.I.

About a name unjustly forgotten; on the 150th anniversary of birth of the Ukrainian geologist P.O. Kul'shyn. Trudy Inst.ist. est.i tekh. 37:176-185 '61. (MIRA 14:10)
(Kul'shyn, Pavlo Oxypovych, 180?-1880)

POTOLOKOV, Sergey Ivanovich; BOGOYAVLENSKIY, Ye.P., retsenzent; LYUBOVTSEVA, N.M., retsenzent; NIKOLAYEV, L.N., spetsredaktor; MOROZOVA, I.I., redaktor; CHEBYSHEVA, Ye.A., tekhnicheskiy redaktor

[Technology of cooperage] Tekhnologiia bondarnogo proizvodstva. Izd.2-oe, ispr.i dop. Moskva, Pishchepromizdat, 1957. 325 p. (Coopers and cooperage) (MLRA 10:9)

POTCLEA, Eugen

Reactances of the synchronous machine on the theory of symmetrical components. Bul Inst Politeh 25 no.5:117-135 S-O '63.

1. Department of Power Stations, Bucharest Polytechnic Institute.

POTOLEA, Eugen, ing., candidat in stiinte tehnice (Bucuresti)

A simultaneous determination method for synchronous reactances in machines with visible poles. Electrotehnica 9 no.3:102-106 Mr '61

1. Conferentiar la Institutul Politehnic, Bucuresti.

POTOLEA, Eugen

Equivalent systems for the two-conductor ground lines. Energetica Bucur 9 no.12:472-480 D '61.

TOMA, I., dr.; CONSTANTINESCU, L., dr.; FRIEDMAN, L., dr.; POTOLINCA, V., dr. HARASIM, D., dr.

Acute poisoning with an insecto-fungicide in children (considered in relation to 6 clinical cases). Pediatria (Bucur.) 13 no.6:545-549 N-D '64

1. Lucrare efectuata in Sectia de pediatrie a Spitalului raional Falticeni (medic sef de sectie: dr. L. Constantinescu).

SHKUL'TIN, Vasiliy Ivanovich, inzh.; SHER, Yuliya Mikhaylovna, kand. tekhn. nauk; GAZIYEV, Abdul Gafurovich, inzh.; BAMM, Aleksandr Isaakovich, inzh.; NIKITIN, Grigoriy Vasil'yevich, inzh.; POTOLOKOV, Sergey Ivanovich, inzh.; DONNIKOVA, A.A., red.izd-va; GRECHISHCHEVA, V.I., tekhn. red.

[Containers for shipment] Transportnaia tara. [By] V.I. Shkul'tin. i dr. Moskva, Goslesbumizdat, 1963. 436 p. (MIRA 16:11)

(Containers)

POTOLOKOV, Sergey Ivanovich; MOROZOVA, I.I., red.; ZARSHCHIKOVA, L.N., tekhn. red.

[Manufacture of tight and slack barrels]Proizvodstvo zalivnykh i sukhotarnykh bochek. Moskva, Pishchepromizdat, 1962. 357 p. (MIRA 15:12)

(Coopers and cooperage)

ABEL', Faina Khaimovna; BRAYTSEVA, Tat'yana L'vovna; POTOLOKOV, S.I., spetsred.; ITSKOVICH, V.A., red.; FORMALINA, YeA., tekhn.red.

[Use of polymeric materials in the packing of fishery products] Primenenie polimernykh materialov dlia upakovki rybnoi produktsii. Moskva, TSentr. nauchno-issl. laboratoriia tary, 1960. 42 p. (MIRA 14:5)

(Fishery products--Packaging) (Plastics)

BELOV, V. YU.; POTOLOKOV, S.I.

Barrels

Progressive work methods in a barrel factory. Ryb. khoz., 28, No. 6, 1952.

9. Monthly List of Russian Accessions, Library of Congress, October 1952 1953, Uncl.

POTOLOV, A.P.

Chopping machines for reed. Bum.prom. 38 no.9:29 S '63.
(MIRA 16:11)

1. TSentral'nyy nauchno-issledovatel'skiy i proyektno-konstruktorskiy institut bumagodelatel'nogo mashinostroyeniya.

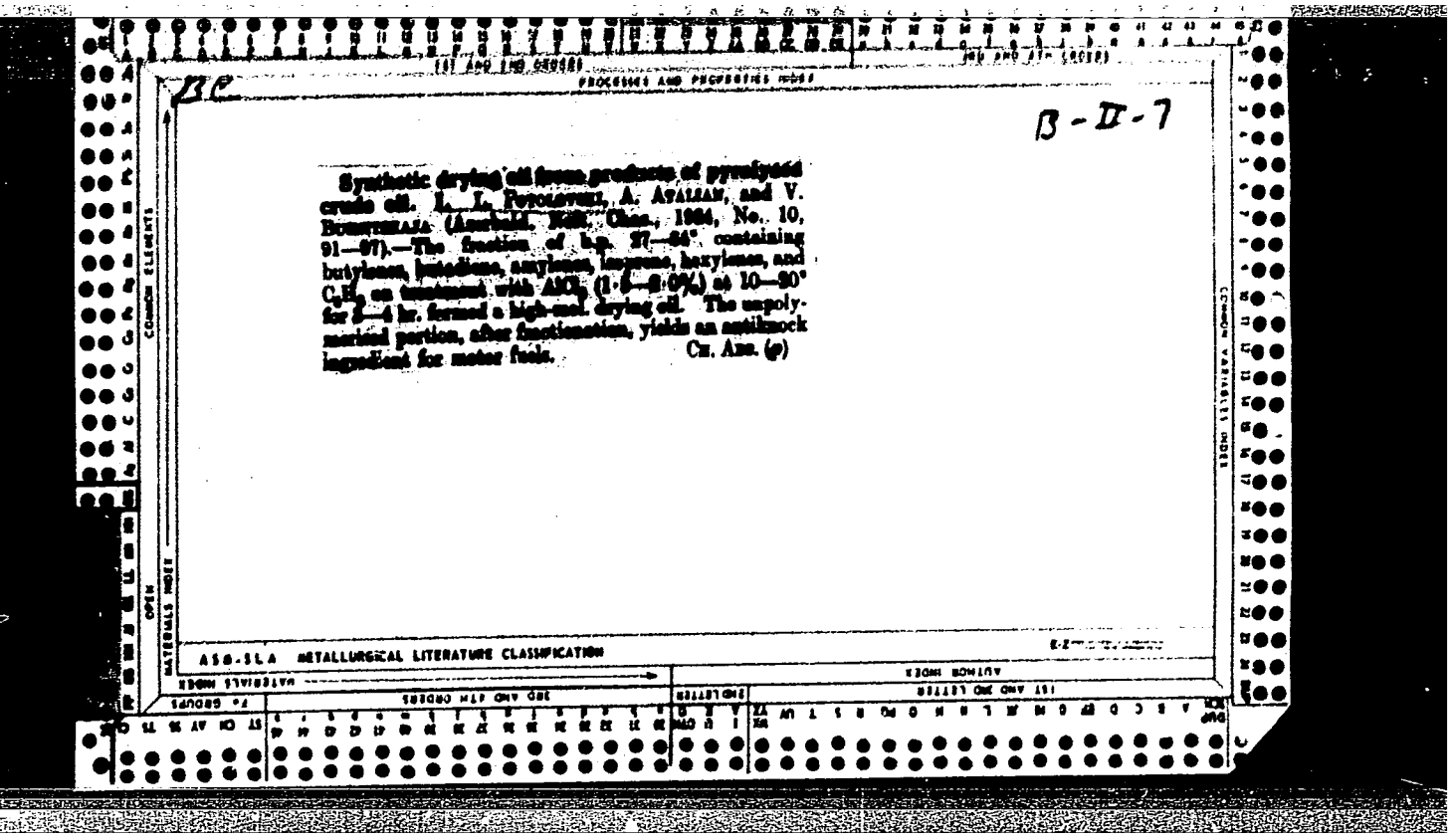
POTOLOV, A.P.

Soviet "DTs-01" difibering device. Bum.prom. 38 no.1:28 Ja '63. (MIRA 16:2)

1. Glavnyy konstruktor TSentral'nogo nauchno-issledovatel'skogo i proyektno-konstruktorskogo instituta bumagodelatel'nogo mashinostroyeniya.
(Woodpulp industry--Equipment and supplies)

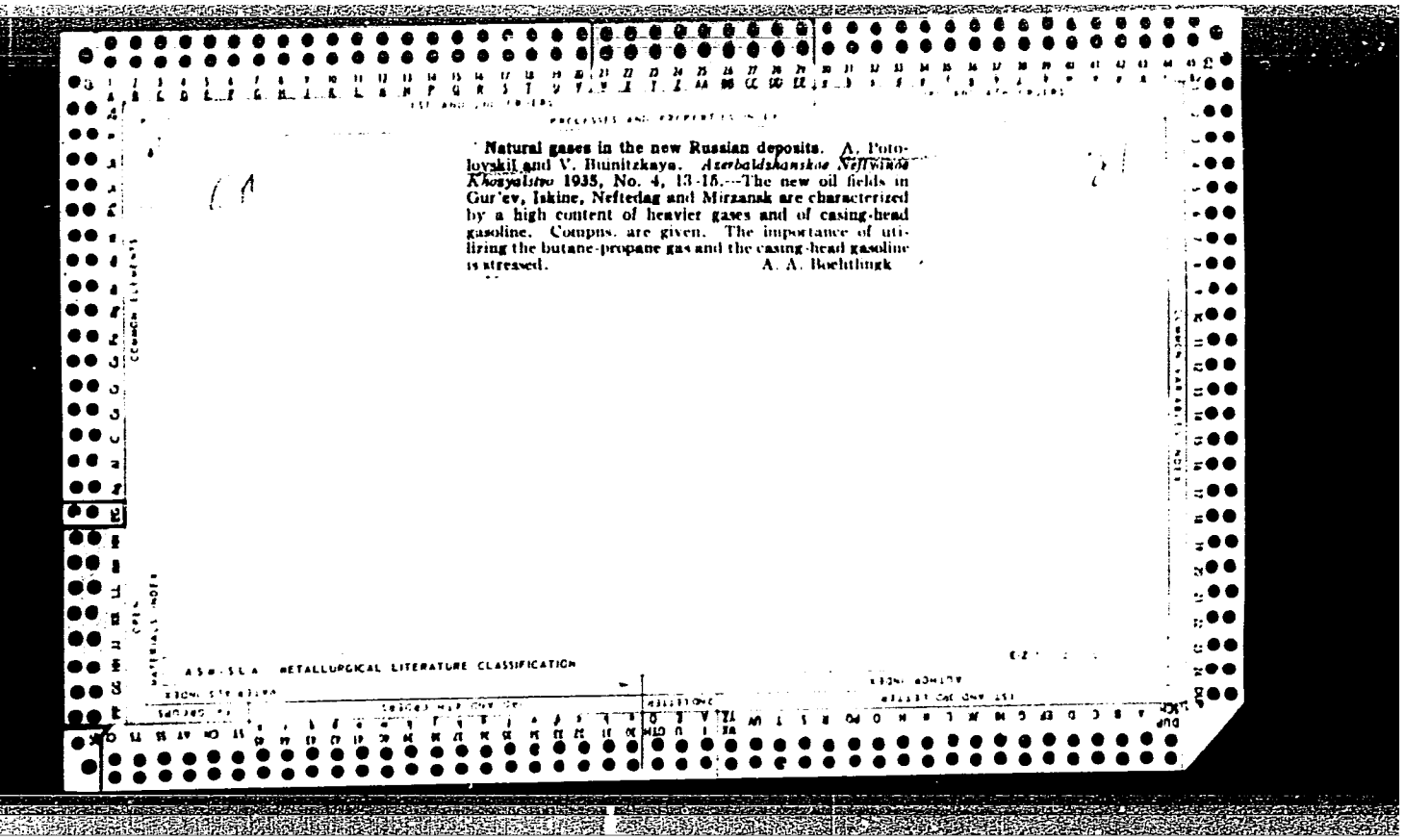
POTOLOV, S.I. (Leningrad)

Devoted geologist. Nauka i zhyttia 9 no.1:45-46 Ja '59.
(MIRA 12:1)
(Kul'shyn, Pavlo Iosypovych, 1809-1880)



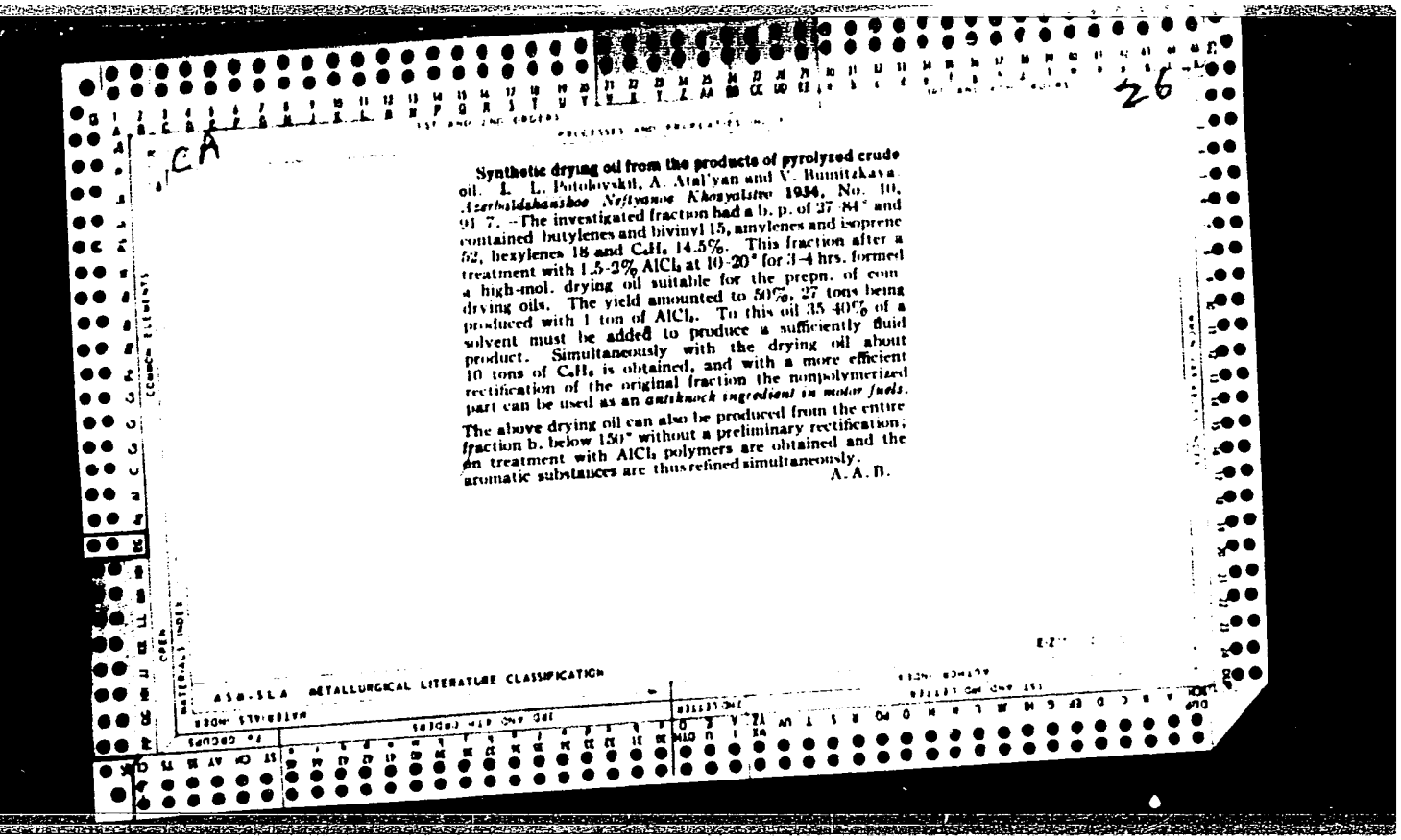
B-II-7

Synthetic drying oil from products of pyrolysed crude oil. L. L. Popolovskii, A. Atalian, and V. Bondarenkaia (Azerbaid. Neft. Khoz., 1934, No. 10, 91—97).—The fraction of b.p. 27.—64°, containing butylenes, butadiene, amylenes, isoprene, hexylenes, and C_6H_6, on treatment with $AlCl_3$ (1·5—2·0%) at 10—30° for 2—4 hr. formed a high-mol. drying oil. The unpolymerised portion, after fractionation, yields an antiknock ingredient for motor fuels. Ch. Abs. (p)



Natural gases in the new Russian deposits. A. Pototskii and V. Bunitzkaya. *Azerbaidzhanskoe Neftyanoe Khozyaistvo* 1935, No. 4, 13-16.—The new oil fields in Gur'ev, Iakine, Neftedag and Mirzaak are characterized by a high content of heavier gases and of casing-head gasoline. Compns. are given. The importance of utilizing the butane-propane gas and the casing-head gasoline is stressed. A. A. Boelthingk

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION

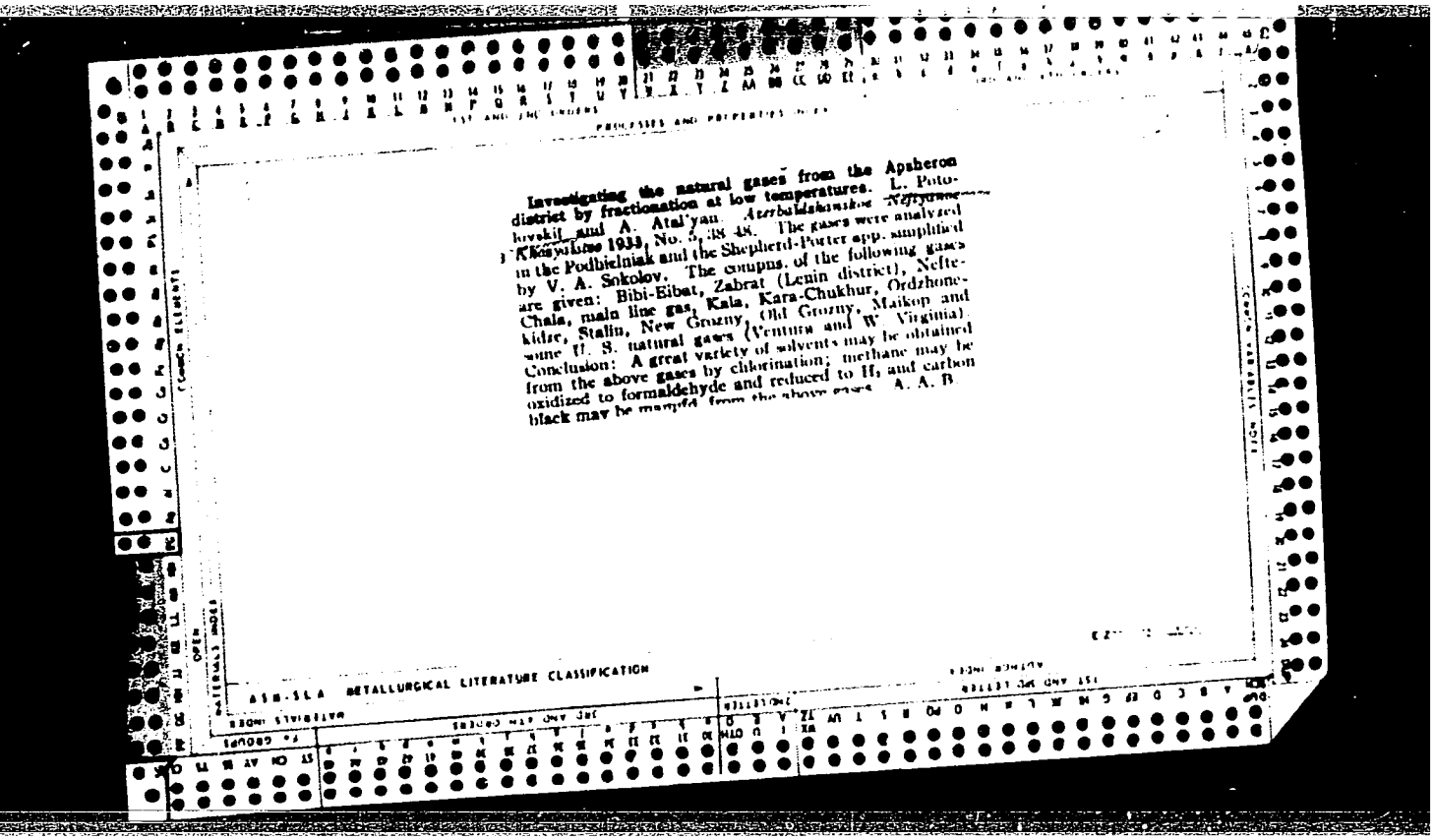


CA

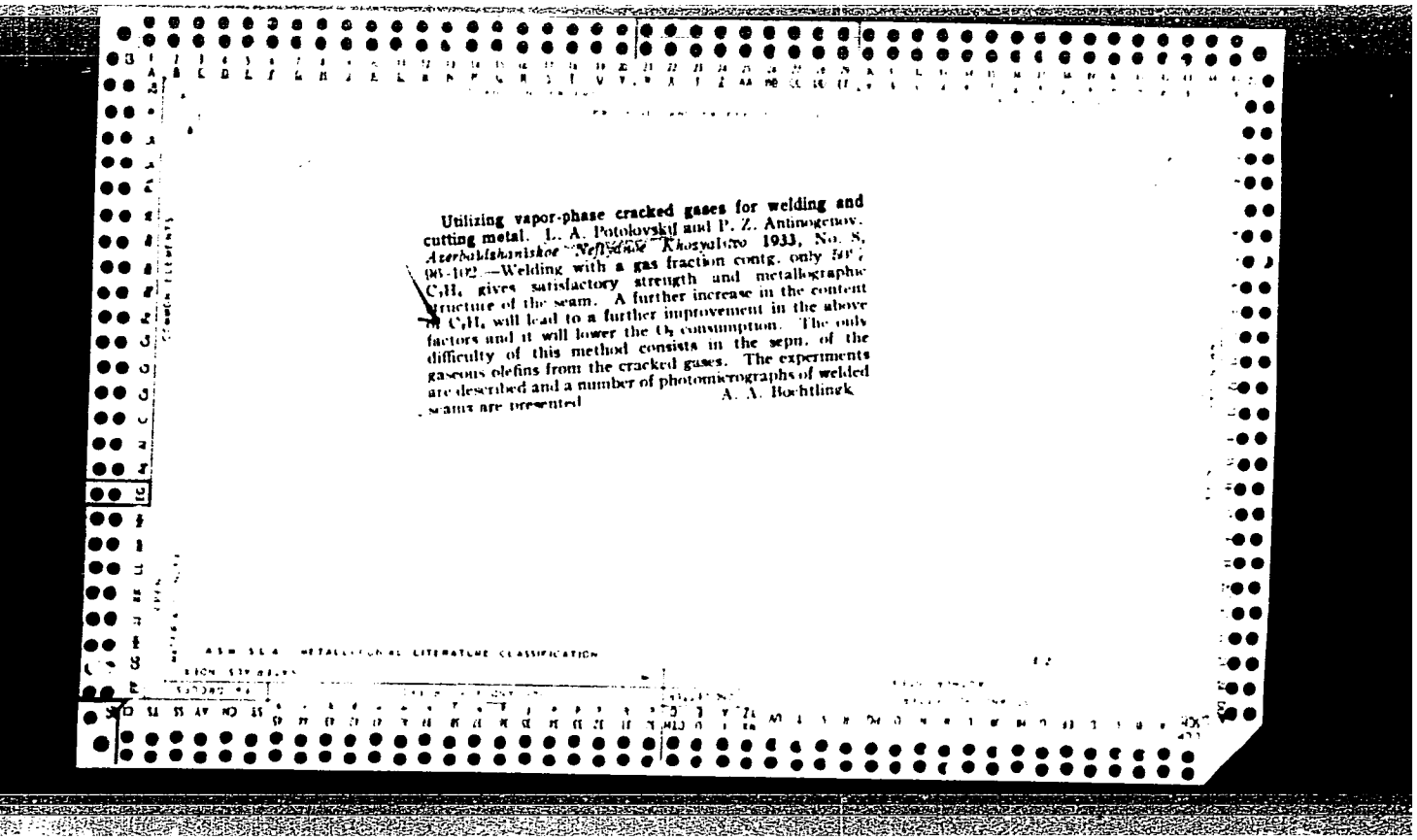
Synthetic drying oil from the products of pyrolyzed crude oil. I. L. Potolovskii, A. Atal'yan and V. Bunitzkaya. *Azerbaidzhanskoe Neftyanoe Khozyaistvo* **1934**, No. 10, 91-7.—The investigated fraction had a b. p. of 37-84° and contained butylenes and bivinyl 15, amylenes and isoprene 52, hexylenes 18 and C_6H_6 14.5%. This fraction after a treatment with 1.5-2% $AlCl_3$ at 10-20° for 3-4 hrs. formed a high-mol. drying oil suitable for the prepn. of com drying oils. The yield amounted to 50%; 27 tons being produced with 1 ton of $AlCl_3$. To this oil 35-40% of a solvent must be added to produce a sufficiently fluid product. Simultaneously with the drying oil about 10 tons of C_6H_6 is obtained, and with a more efficient rectification of the original fraction the nonpolymerized part can be used as an *antiknock ingredient in motor fuels*. The above drying oil can also be produced from the entire fraction b. below 150° without a preliminary rectification; on treatment with $AlCl_3$ polymers are obtained and the aromatic substances are thus refined simultaneously.

A. A. B.

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION

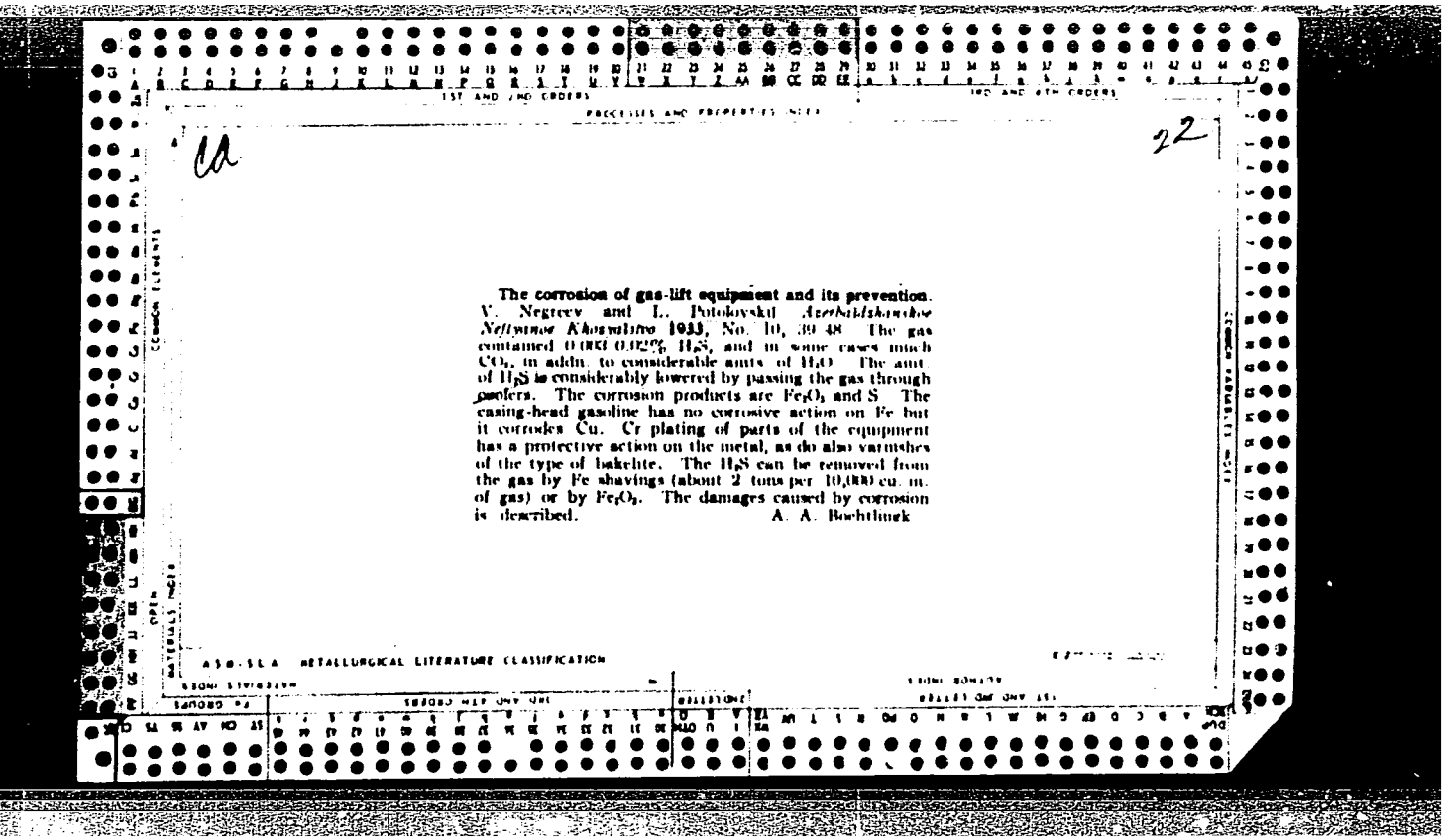


Investigating the natural gases from the Apsheron district by fractionation at low temperatures. L. Poto-lovskii and A. Atal'yan. *Azerbaidzhanskoe Neftyanoe Khozyaistvo* 1933, No. 5, 38-48. The gases were analyzed in the Podbielniak and the Shepherd-Porter app. simplified by V. A. Sokolov. The compns. of the following gases are given: Bibi-Eibat, Zabrat (Lenin district), Neftechala, main line gas, Kala, Kara-Chukhur, Ordzhonekidze, Stalin, New Grozny, (Old Grozny, Maikop and some U. S. natural gases (Ventura and W. Virginia). Conclusion: A great variety of solvents may be obtained from the above gases by chlorination; methane may be oxidized to formaldehyde and reduced to H_2 and carbon black may be [illegible] A. A. B.



Utilizing vapor-phase cracked gases for welding and cutting metal. L. A. Potolovskii and P. Z. Antinogenov. *Azerbaidzhanskoe Neftyanoe Khozyaistvo* 1933, No. 8, 98-102.—Welding with a gas fraction contg. only 50% C_2H_2 gives satisfactory strength and metallographic structure of the seam. A further increase in the content of C_2H_2 will lead to a further improvement in the above factors and it will lower the O_2 consumption. The only difficulty of this method consists in the sepn. of the gaseous olefins from the cracked gases. The experiments are described and a number of photomicrographs of welded seams are presented.

A. A. Boehtlingk

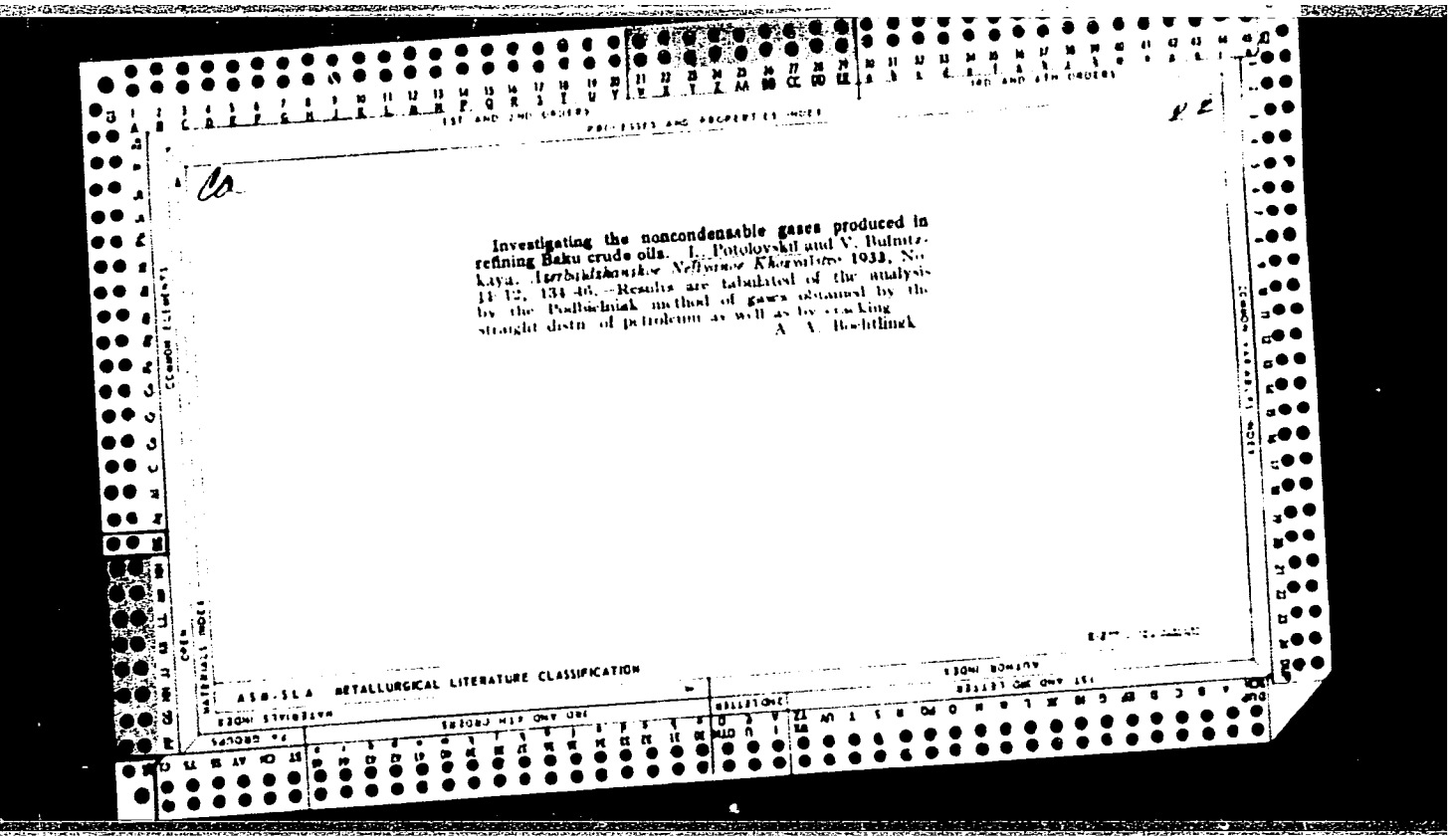


11a

22

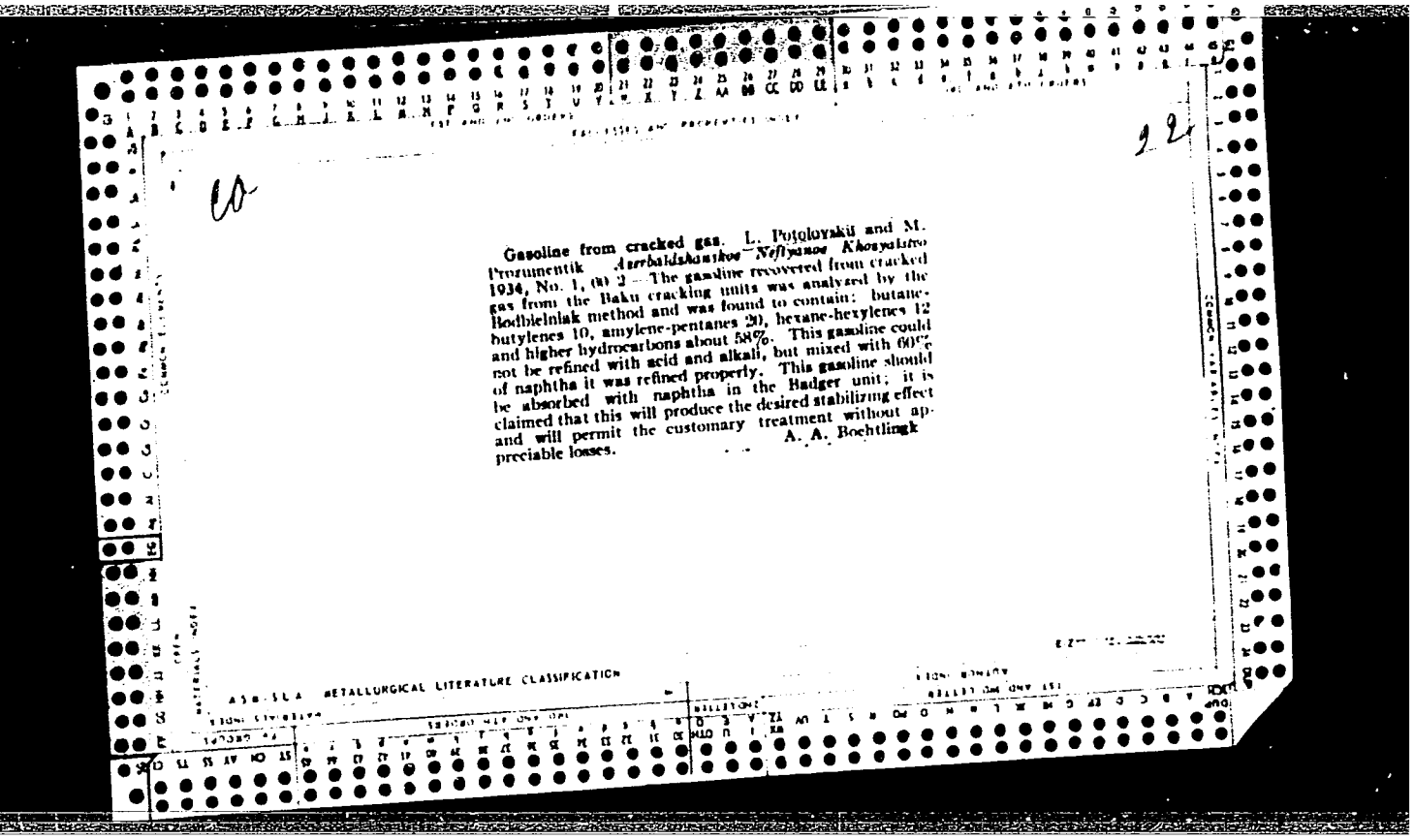
The corrosion of gas-lift equipment and its prevention. V. Negrecv and L. Pototovskil. *Azerbaidzhanskoe Neftyanoe Khozyaistvo* **1933**, No. 10, 39-48. The gas contained 0.001-0.02% H_2S, and in some cases much CO_2, in addn. to considerable amts. of H_2O. The amt. of H_2S is considerably lowered by passing the gas through coolers. The corrosion products are $Fe(O)_3$ and S. The casing-head gasoline has no corrosive action on Fe but it corrodes Cu. Cr plating of parts of the equipment has a protective action on the metal, as do also varnishes of the type of bakelite. The H_2S can be removed from the gas by Fe shavings (about 2 tons per 10,000 cu. m. of gas) or by Fe_2O_3. The damages caused by corrosion is described. A. A. Boehtlingk

A.S.T.M. METALLURGICAL LITERATURE CLASSIFICATION



Investigating the noncondensable gases produced in refining Baku crude oils. L. Pototovskii and V. Bulnutskaya. *Azerbaidzhanskoe Neftyanoe Khozyaistvo* 1933, No. 11-12, 134-46.—Results are tabulated of the analysis by the Podbielniak method of gases obtained by the straight distn. of petroleum as well as by cracking.
A. V. Raehlmack

A58-SLA METALLURGICAL LITERATURE CLASSIFICATION



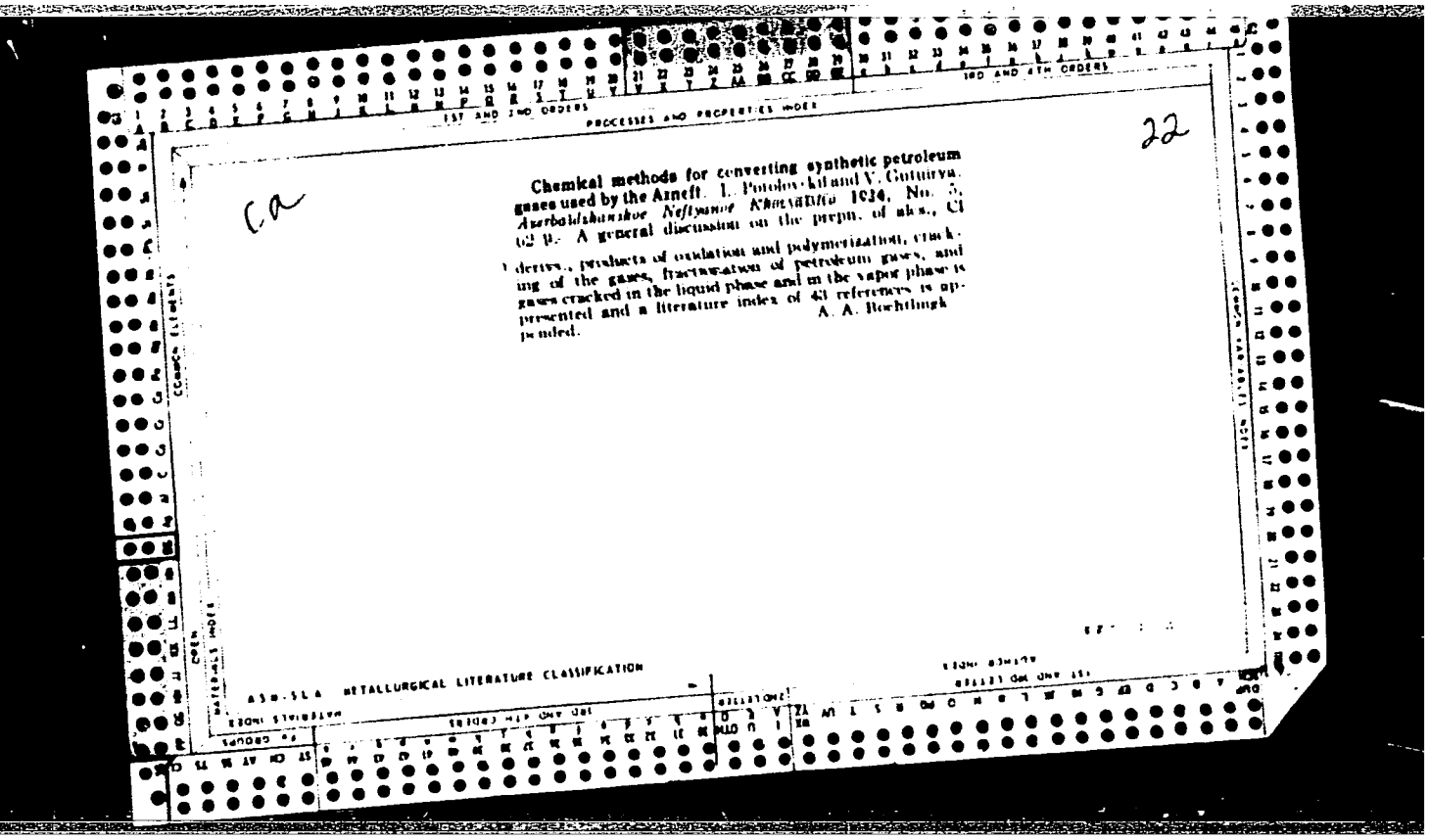
10

12

Gasoline from cracked gas. L. Potolovskii and M. Prozumentik. *Azerbaidzhanskoe Neftyanoe Khozyaistvo* 1934, No. 1, (a) 2.—The gasoline recovered from cracked gas from the Baku cracking units was analyzed by the Rodbielniak method and was found to contain: butane-butylenes 10, amylene-pentanes 20, hexane-hexylenes 12 and higher hydrocarbons about 58%. This gasoline could not be refined with acid and alkali, but mixed with 60% of naphtha it was refined properly. This gasoline should be absorbed with naphtha in the Badger unit; it is claimed that this will produce the desired stabilizing effect and will permit the customary treatment without appreciable losses.

A. A. Boehtlingk

A58-SLA METALLURGICAL LITERATURE CLASSIFICATION

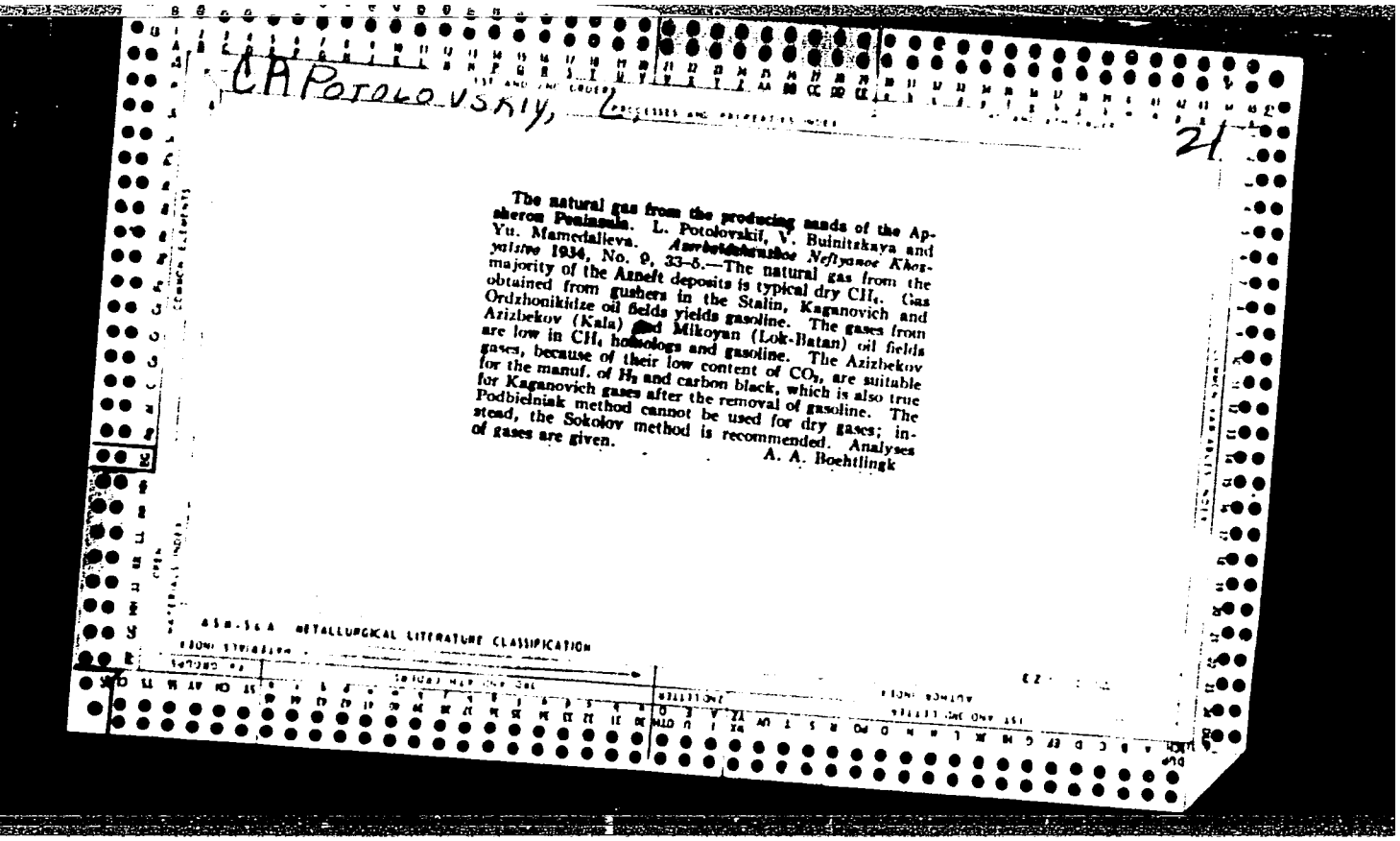


22

CA

Chemical methods for converting synthetic petroleum gases used by the Azneft. I. Potolov-kii and V. Gutnova. *Azerbaidzhanskoe Neftyanoe Khozyaistvo* 1934, No. 5, 62 p. A general discussion on the prepn. of alks., Cl derivs., products of oxidation and polymerization, cracking of the gases, fractionation of petroleum gases, and gases cracked in the liquid phase and in the vapor phase is presented and a literature index of 43 references is appended.

A. A. Rochtlingk



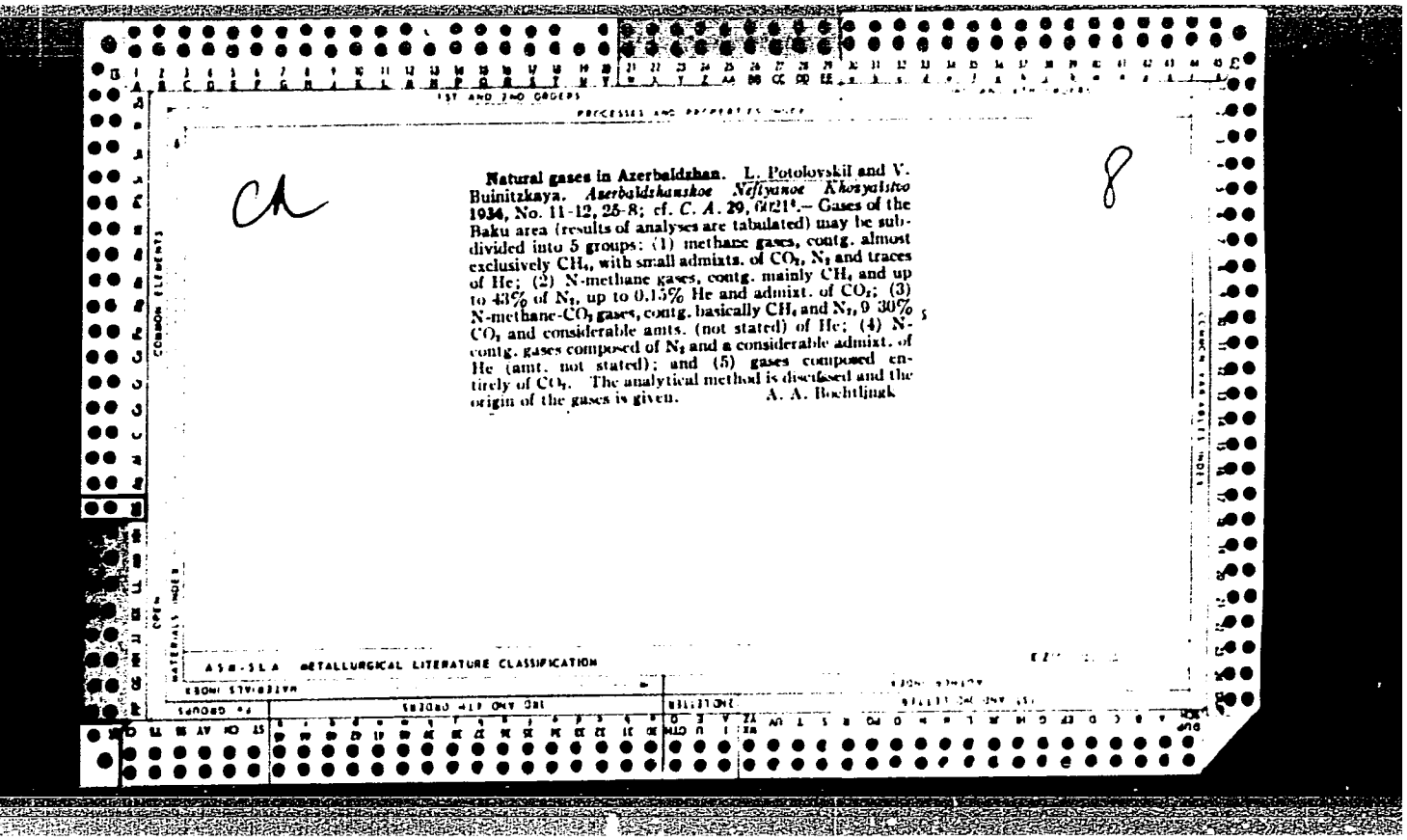
CA Potolovskiy, L.

21

The natural gas from the producing sands of the Apsheron Peninsula. L. Potolovskii, V. Buinitskaya and Yu. Mamedalieva. *Azerbaidzhanskoe Neftyanoe Khozyaistvo* 1934, No. 9, 33–5.—The natural gas from the majority of the Arneft deposits is typical dry CH_4. Gas obtained from gushers in the Stalin, Kaganovich and Ordzhonikidze oil fields yields gasoline. The gases from Azizbekov (Kala) and Mikoyan (Lok-Batan) oil fields are low in CH_4 homologs and gasoline. The Azizbekov gases, because of their low content of CO_2, are suitable for the manuf. of H_2 and carbon black, which is also true for Kaganovich gases after the removal of gasoline. The Podbielniak method cannot be used for dry gases; instead, the Sokolov method is recommended. Analyses of gases are given.

A. A. Boehtlingk

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION

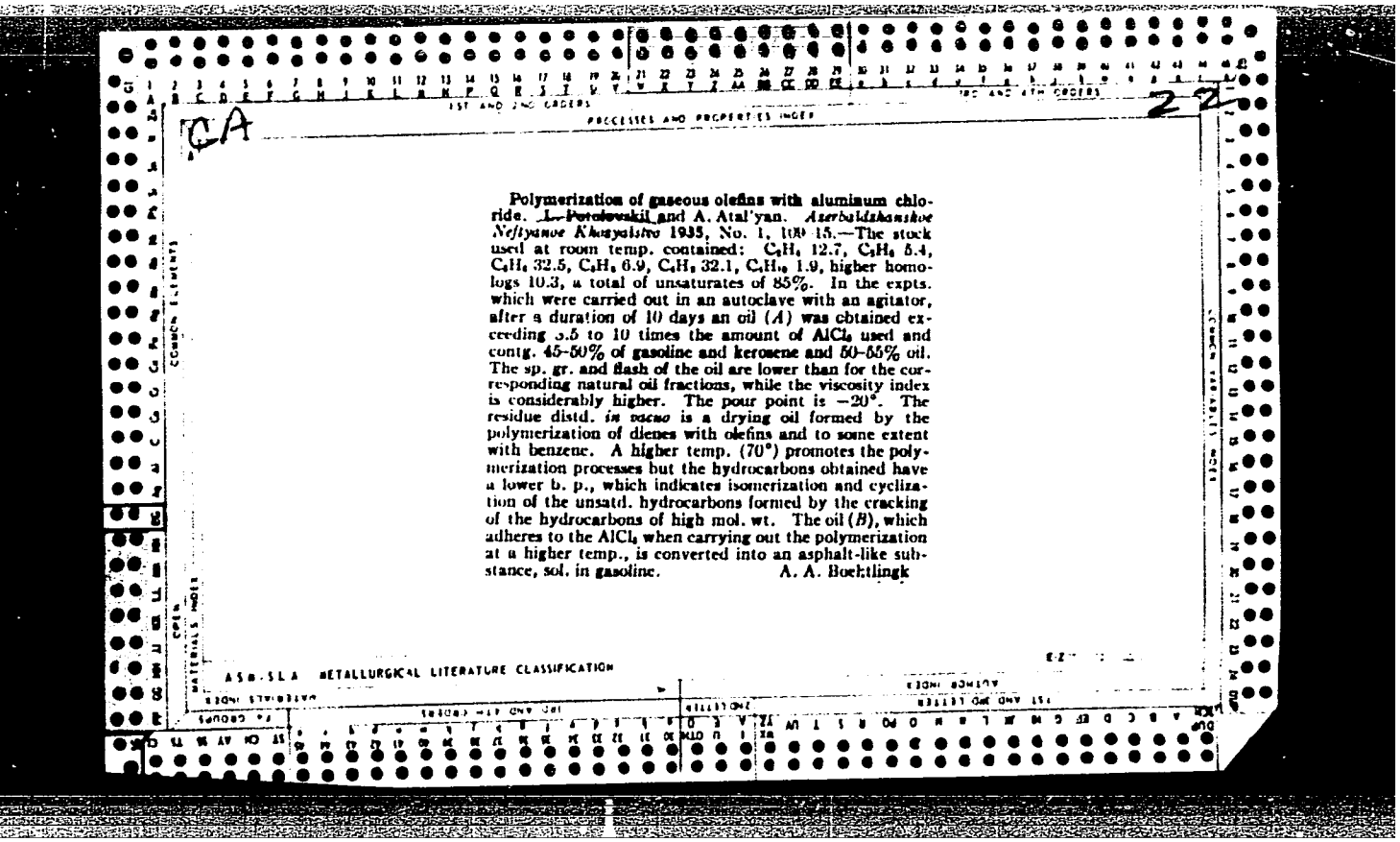


CA

8

Natural gases in Azerbaidzhan. L. Pototovskii and V. Buinitzkaya. *Azerbaidzhanskoe Neftyanoe Khozyaistvo* **1934**, No. 11-12, 25-8; cf. *C. A.* **29**, 6821⁸.— Gases of the Baku area (results of analyses are tabulated) may be subdivided into 5 groups: (1) methane gases, contg. almost exclusively CH_4, with small admixts. of CO_2, N_2 and traces of He; (2) N-methane gases, contg. mainly CH_4 and up to 43% of N_2, up to 0.15% He and admixt. of CO_2; (3) N-methane-CO_2 gases, contg. basically CH_4 and N_2, 0-30% CO_2 and considerable amts. (not stated) of He; (4) N-contg. gases composed of N_2 and a considerable admixt. of He (amt. not stated); and (5) gases composed entirely of CO_2. The analytical method is discussed and the origin of the gases is given. A. A. Bochtlingk

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION



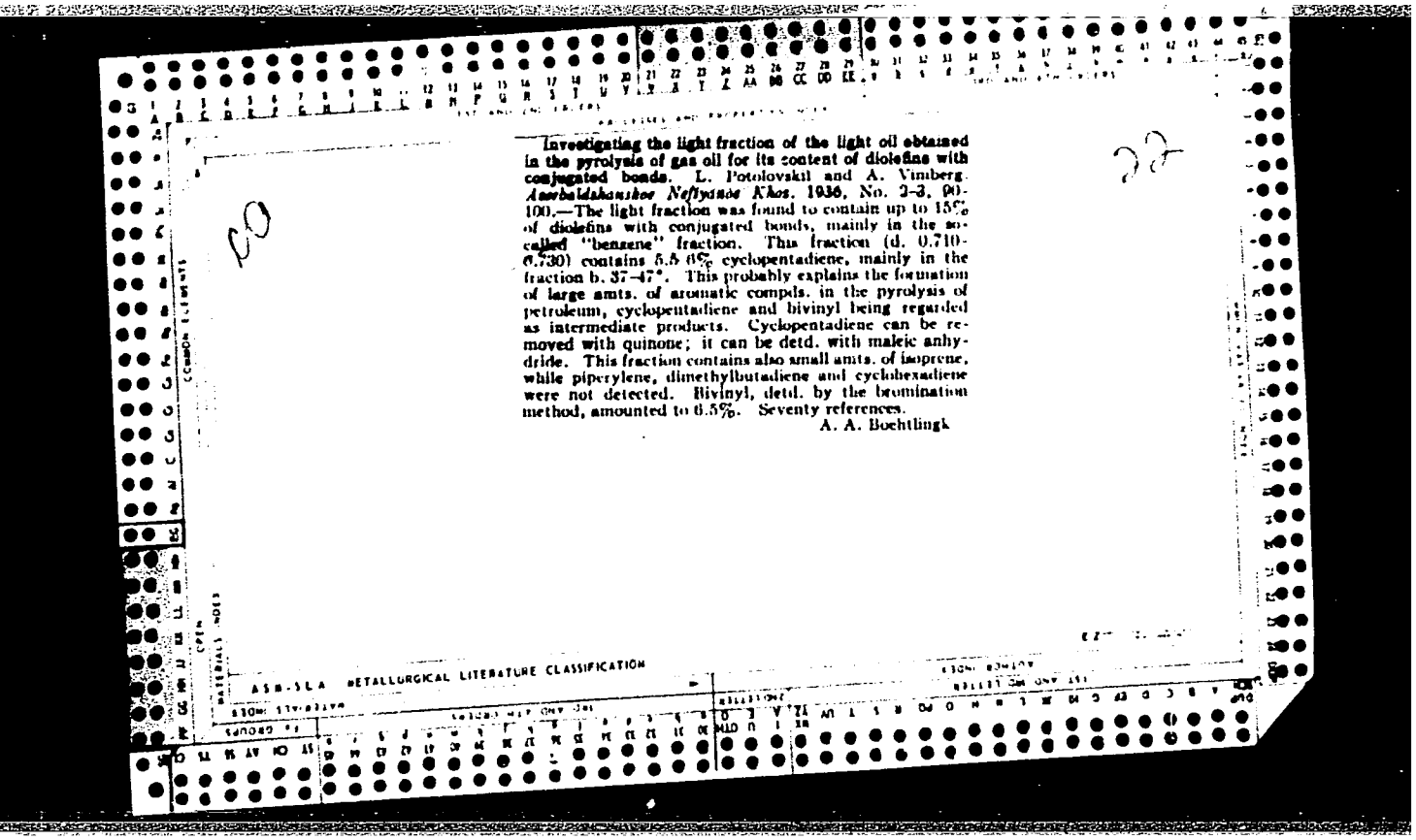
CA

22

PROCESSES AND PROPERTIES INDEX

Polymerization of gaseous olefins with aluminum chloride. L. Petrolevskii and A. Atal'yan. *Azerbaidzhanskoe Neftyanoe Khozyaistvo* 1935, No. 1, 109-15.—The stock used at room temp. contained: C_2H_4 12.7, C_3H_6 5.4, C_4H_8 32.5, C_5H_{10} 6.9, C_6H_{12} 32.1, C_7H_{14} 1.9, higher homologs 10.3, a total of unsaturates of 85%. In the expts. which were carried out in an autoclave with an agitator, after a duration of 10 days an oil (*A*) was obtained exceeding 5.5 to 10 times the amount of $AlCl_3$ used and contg. 45–50% of gasoline and kerosene and 50–55% oil. The sp. gr. and flash of the oil are lower than for the corresponding natural oil fractions, while the viscosity index is considerably higher. The pour point is −20°. The residue distd. *in vacuo* is a drying oil formed by the polymerization of dienes with olefins and to some extent with benzene. A higher temp. (70°) promotes the polymerization processes but the hydrocarbons obtained have a lower b. p., which indicates isomerization and cyclization of the unsatd. hydrocarbons formed by the cracking of the hydrocarbons of high mol. wt. The oil (*B*), which adheres to the $AlCl_3$ when carrying out the polymerization at a higher temp., is converted into an asphalt-like substance, sol. in gasoline. A. A. Boehtlingk

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION



Investigating the light fraction of the light oil obtained in the pyrolysis of gas oil for its content of diolefins with conjugated bonds. L. Pototovskii and A. Vinberg. *Azerbaidzhanskoe Neftyanoe Khoz.* 1936, No. 2-3, 90-100.—The light fraction was found to contain up to 15% of diolefins with conjugated bonds, mainly in the so-called "benzene" fraction. This fraction (d. 0.710-0.730) contains 5.5 6% cyclopentadiene, mainly in the fraction b. 37–47°. This probably explains the formation of large amts. of aromatic compds. in the pyrolysis of petroleum, cyclopentadiene and bivinyl being regarded as intermediate products. Cyclopentadiene can be removed with quinone; it can be detd. with maleic anhydride. This fraction contains also small amts. of isoprene, while piperylene, dimethylbutadiene and cyclohexadiene were not detected. Bivinyl, detd. by the bromination method, amounted to 0.5%. Seventy references.

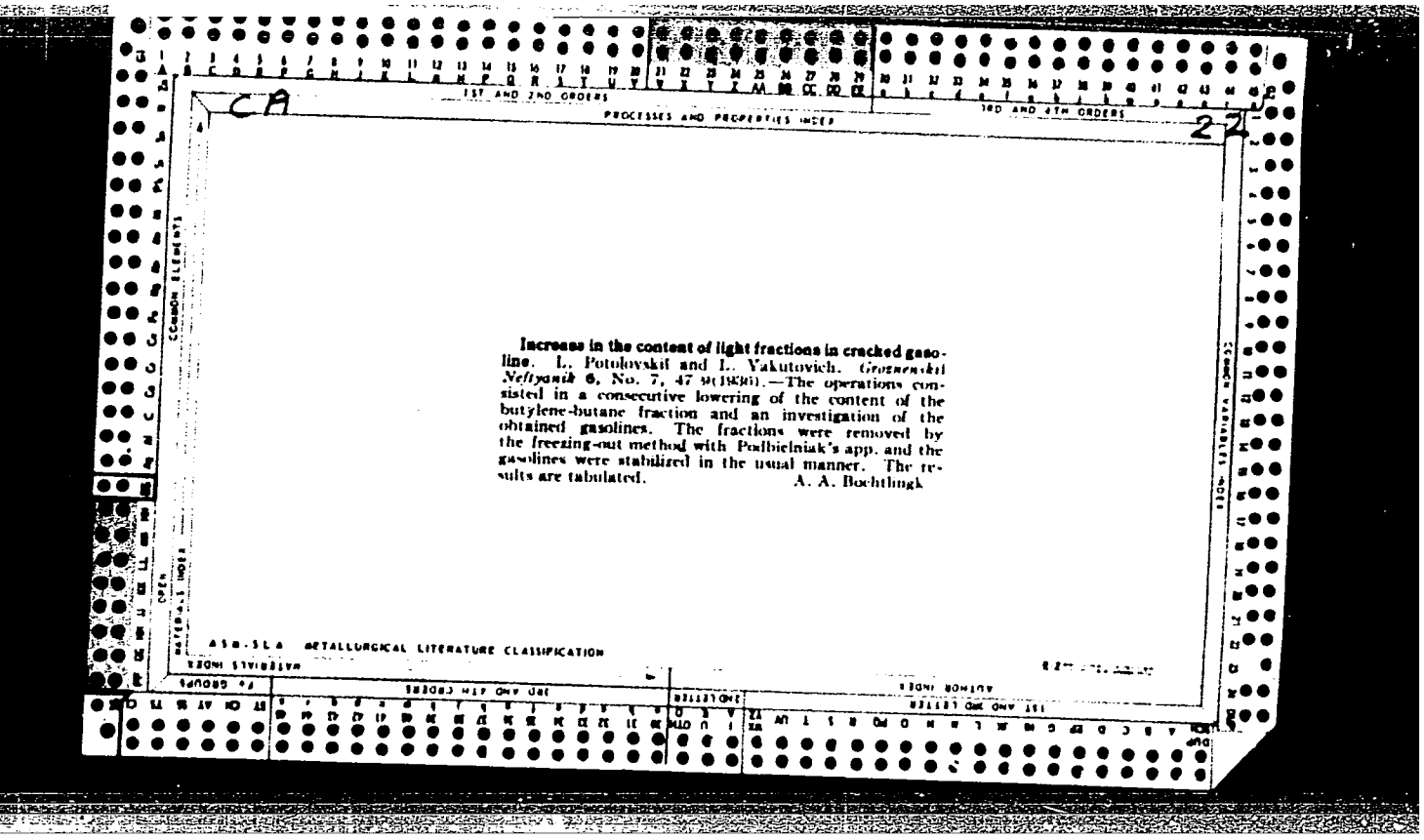
A. A. Boehtlingk

Synthetic polymerized petroleum resins from the products of pyrolysis of crude oil a raw material for the lacquer and paint industry. II. I. A. Potolovskii and A. A. Atal'yan. *Azerbaidzhanskoe Neftyanoe Khoz.* 1936, No. 4, 73-80; cf. *C. A.* 30, 8648. – A light oil is introduced into a kettle provided with an agitator and 2 openings, one for the thermometer and the other for the admission of $AlCl_3$. $AlCl_3$ is gradually added during 2-3 hrs. under const. agitation, causing an intensive polymerization of olefins, diolefins and substituted aromatic compds., contained in the light fractions, whereby resins are obtained. The operation is carried out with const. cooling to 15-25°, since the reaction is exothermic. The product contains solid and liquid components; the former ppt. to the bottom and are filtered, while the soln. is treated with 10% of a 15-20% soln. of NaOH to neutralize the products and to break the complex products of $AlCl_3$ and hydrocarbons. This treatment changes the color of the product from black to brownish. The solid polymers float on the alkali layer and are removed together with this layer. The liquid is then distd. on the open fire and then with steam to remove the low-boiling polymerization products and the unchanged light-oil aromatic ingredients. The remaining product can be used as a drying oil or as a lacquer, depending upon the consistency. Best results are obtained by using for the stock a fresh light oil high in unsatd. hydrocarbons able to form petroleum resins.

of dimethylnaphthalenes; and the previously found naphthalene, anthracene and phenanthrene. Method of sepg. the above compds. are given. Thirty references.

A. A. Podgorny

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION



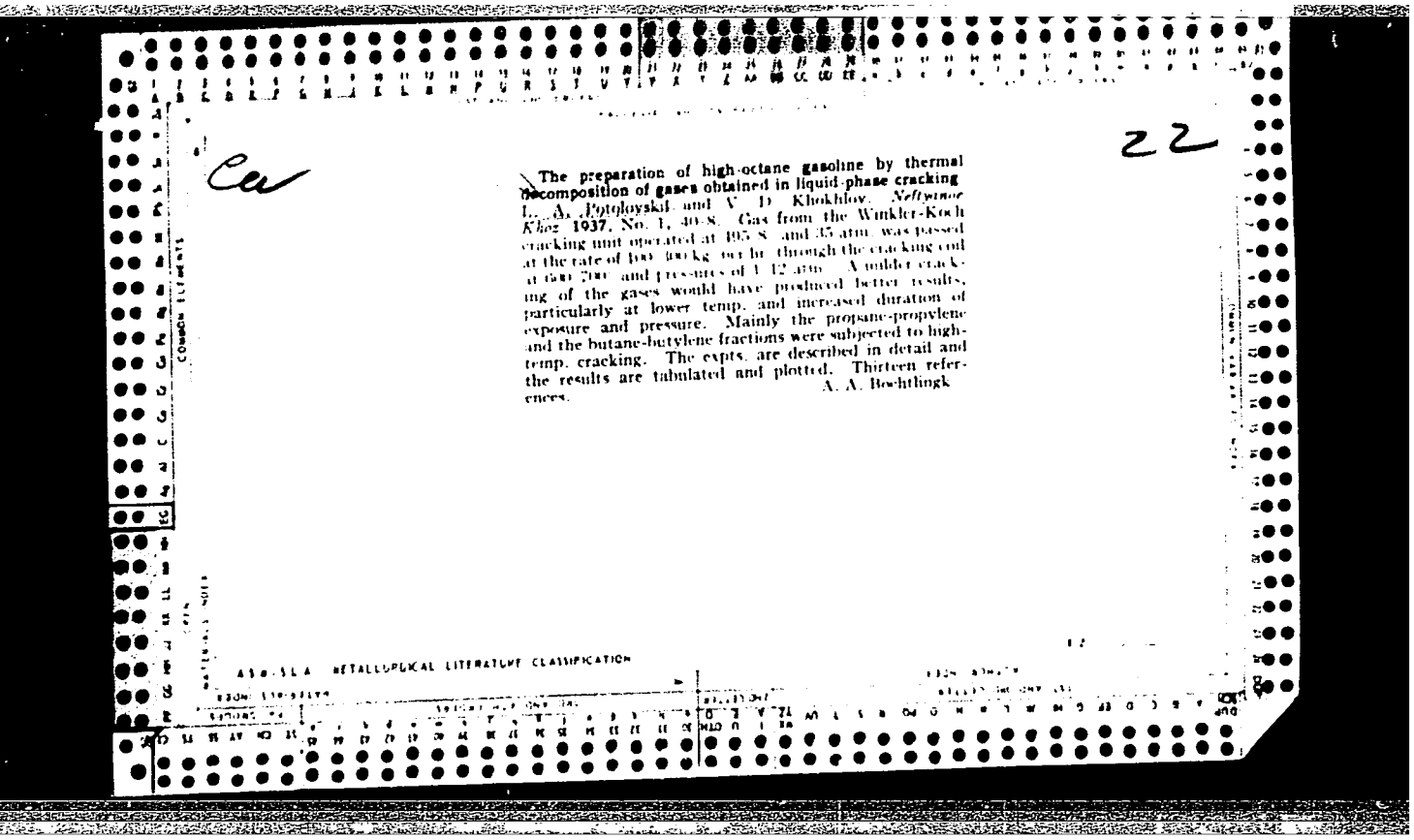
Increase in the content of light fractions in cracked gasoline. L. Pototovskii and L. Vakutovich. *Groznenskii Neftyanik* **6**, No. 7, 47-9(1930).—The operations consisted in a consecutive lowering of the content of the butylene-butane fraction and an investigation of the obtained gasolines. The fractions were removed by the freezing-out method with Podbielniak's app. and the gasolines were stabilized in the usual manner. The results are tabulated. A. A. Bochtlingk

22

Ca

Synthesis of polymerized petroleum resins from the products of pyrolyzed petroleum. III. I. A. Potolovskii. *Azerbaidzhanskoe Neftyanoe Khoz.* 1936, No. 11, 46-51; cf. C. A. 31, 2802[4], 7263[3]. A light oil of d[20] 0.851-0.871, initial b. p. 43-63°, end b. p. 225-45°, over below 100° 20-40%, residue 1.2-1.4%, and losses 0.6-0.8%, polymerized with 0.5 to 2.1% $AlCl_3$ at 25-30 gave 19-20% resins and 78.5-79% refined oil. The polymerization product was neutralized with NaOH at room temp., allowed to settle, and steam-distd. to sep. the oil from the resins. The remaining light oil contained benzene and toluene. The process is described and illustrated. A. A. Boehtlingk

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION



Cw

22

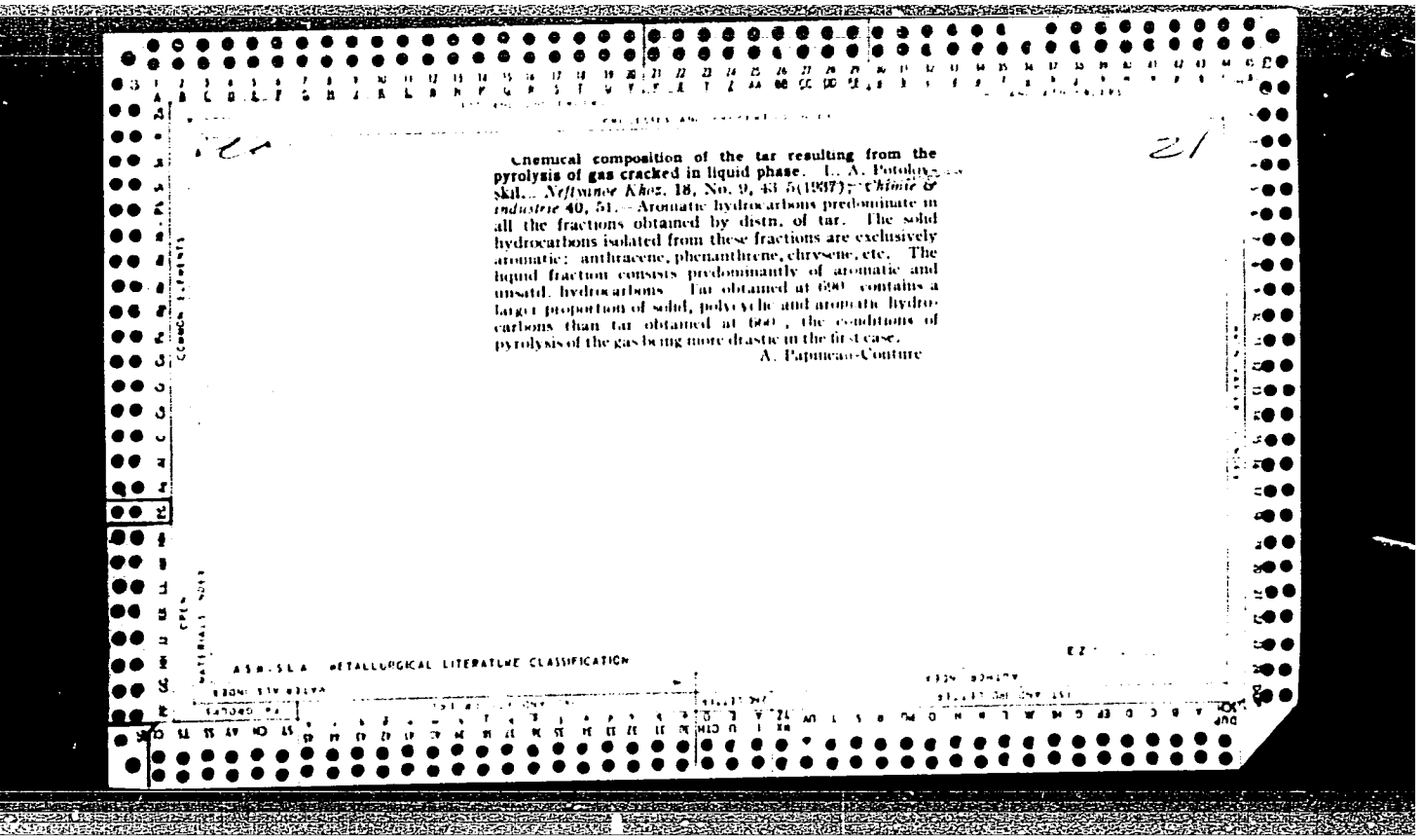
The preparation of high-octane gasoline by thermal decomposition of gases obtained in liquid-phase cracking. L. A. Potolovskii and V. D. Khokhlov. *Neftyanoe Khoz.* 1937, No. 1, 40-8. Gas from the Winkler-Koch cracking unit operated at 495° S. and 35 atm. was passed at the rate of 100 kg. per hr. through the cracking coil at 600-700° and pressures of 1-12 atm. A milder cracking of the gases would have produced better results, particularly at lower temp. and increased duration of exposure and pressure. Mainly the propane-propylene and the butane-butylene fractions were subjected to high-temp. cracking. The expts. are described in detail and the results are tabulated and plotted. Thirteen references. A. A. Boehtlingk

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION

22

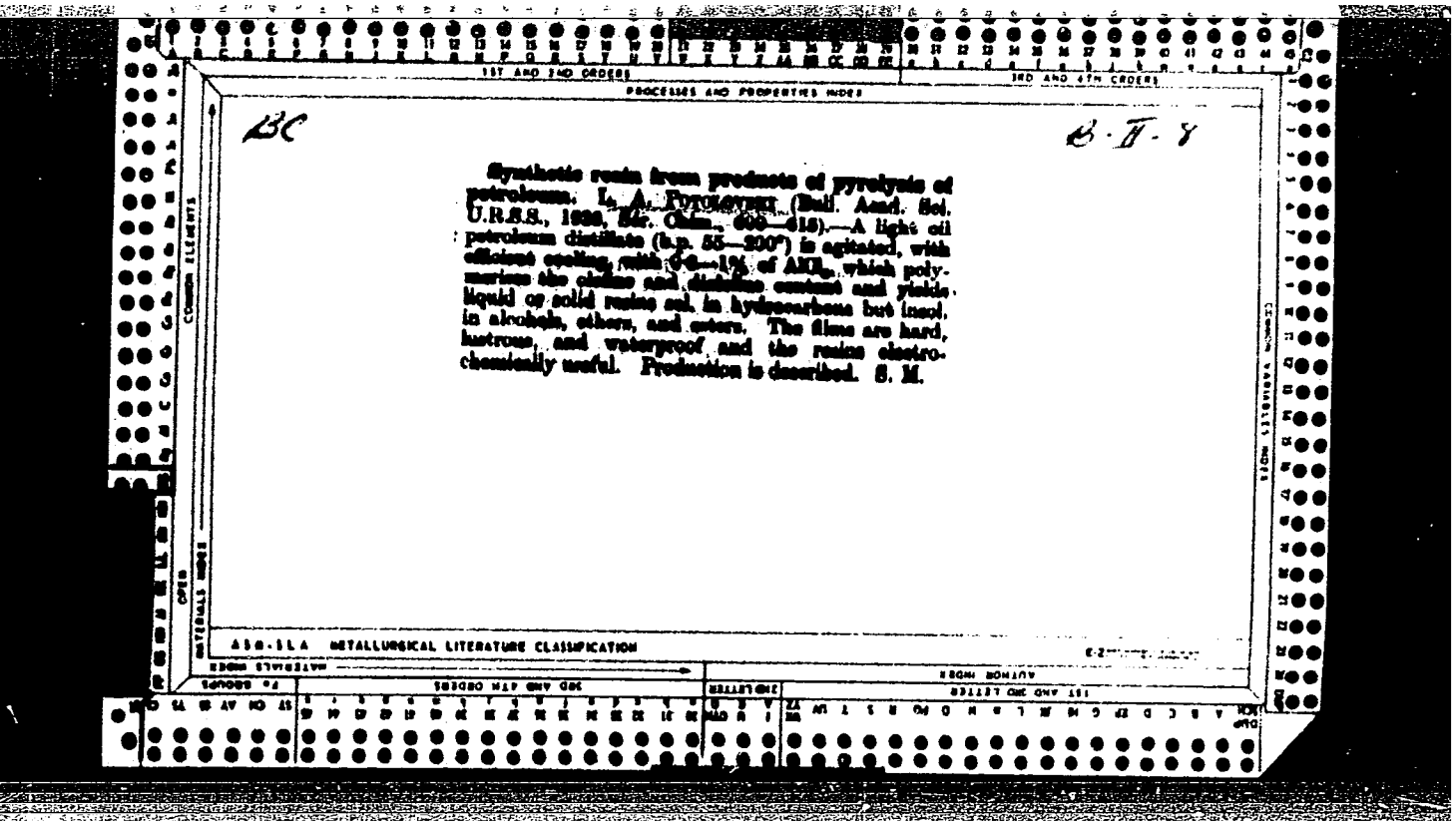
Increasing the ethylene yield in the pyrolysis of petroleum products. I. L. A. Potolovskii and A. A. Atal'yan. *Azerbaidzhanskoe Neftyanoe Khoz.* 1937, No. 1, 59-68.—The best ethylene yield was obtained (20.5%) by pyrolyzing gas oil at 775° in the reaction zone for 0.8–1.2 sec. The yield of aromatic hydrocarbons in this case is C_6H_6 6.3 and $C_6H_5CH_3$ 3.8%, while that of propylene is 5.7%. Kerosene yields up to 20% ethylene and C_6H_6 6.3 and $C_6H_5CH_3$ 4.3%. On pyrolyzing the cracked polymers at the above temp. and time, the ethylene yield amtd. to 14–15%, that of C_6H_6 4–5% and of $C_6H_5CH_3$ 3–3.5%. The amt. of coke formed with the polymers is about twice as high as with the other oils under investigation. The highest propylene yield (10–12%) was observed at 725°, decreasing with higher temp. The exptl. procedure is described.

A. A. Boehtlingk



Chemical composition of the tar resulting from the pyrolysis of gas cracked in liquid phase. I. A. Potolovskii. *Neftyanoe Khoz.* 18, No. 9, 43-5(1937); *Chimie & industrie* 40, 51.—Aromatic hydrocarbons predominate in all the fractions obtained by distn. of tar. The solid hydrocarbons isolated from these fractions are exclusively aromatic; anthracene, phenanthrene, chrysene, etc. The liquid fraction consists predominantly of aromatic and unsatd. hydrocarbons. Tar obtained at 690° contains a larger proportion of solid, polycyclic and aromatic hydrocarbons than tar obtained at 640°, the conditions of pyrolysis of the gas being more drastic in the first case.

A. Papineau-Couture

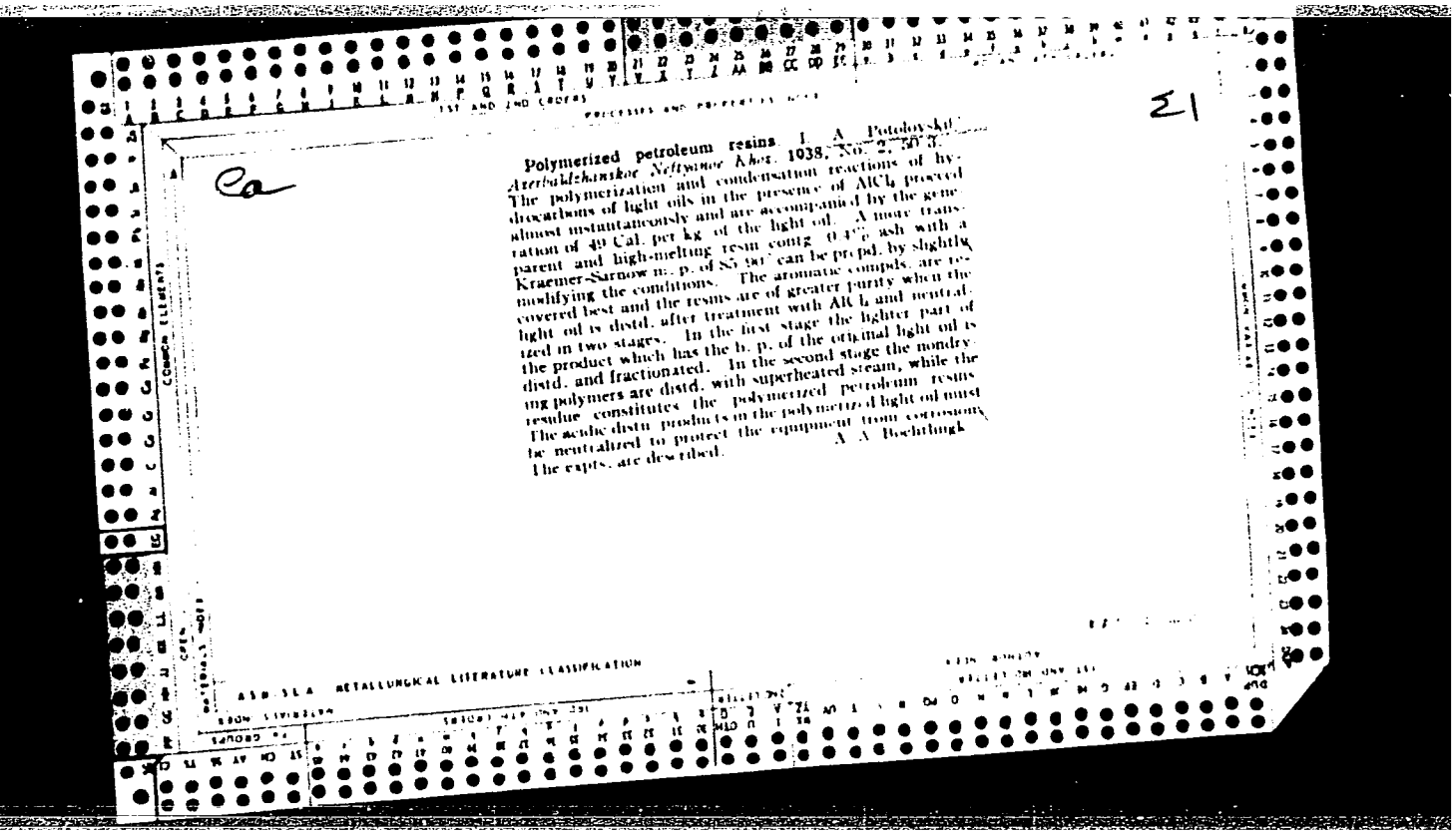


BC

B-II-8

Synthetic resins from products of pyrolysis of petroleum. L. A. Potolovskii (Bull. Acad. Sci. U.R.S.S., 1938, Sér. Chim., 609—615).—A light oil petroleum distillate (b.p. 55—200°) is agitated, with efficient cooling, with 0·6—1% of $AlBr_3$, which polymerises the olefines and diolefines contents and yields liquid or solid resins sol. in hydrocarbons but insol. in alcohols, ethers, and esters. The films are hard, lustrous, and waterproof and the resins electrochemically useful. Production is described. S. M.

A 38-11 A METALLURGICAL LITERATURE CLASSIFICATION



Polymerized petroleum resins. I. A. Potolovskii, *Azerbaidzhanskoe Neftyanoe Khoz.* 1938, No. 2, 50-3.
The polymerization and condensation reactions of hydrocarbons of light oils in the presence of $AlCl_3$ proceed almost instantaneously and are accompanied by the generation of 40 Cal. per kg. of the light oil. A more transparent and high-melting resin contg. 0.4% ash with a Kraemer-Sarnow m. p. of 85° can be prepd. by slightly modifying the conditions. The aromatic compds. are recovered best and the resins are of greater purity when the light oil is distd. after treatment with $AlCl_3$ and neutralized in two stages. In the first stage the lighter part of the product which has the b. p. of the original light oil is distd. and fractionated. In the second stage the nondrying polymers are distd. with superheated steam, while the residue constitutes the polymerized petroleum resins. The acidic distn. products in the polymerized light oil must be neutralized to protect the equipment from corrosion. The expts. are described. A. A. Boichinko

1ST AND 2ND ORDERS

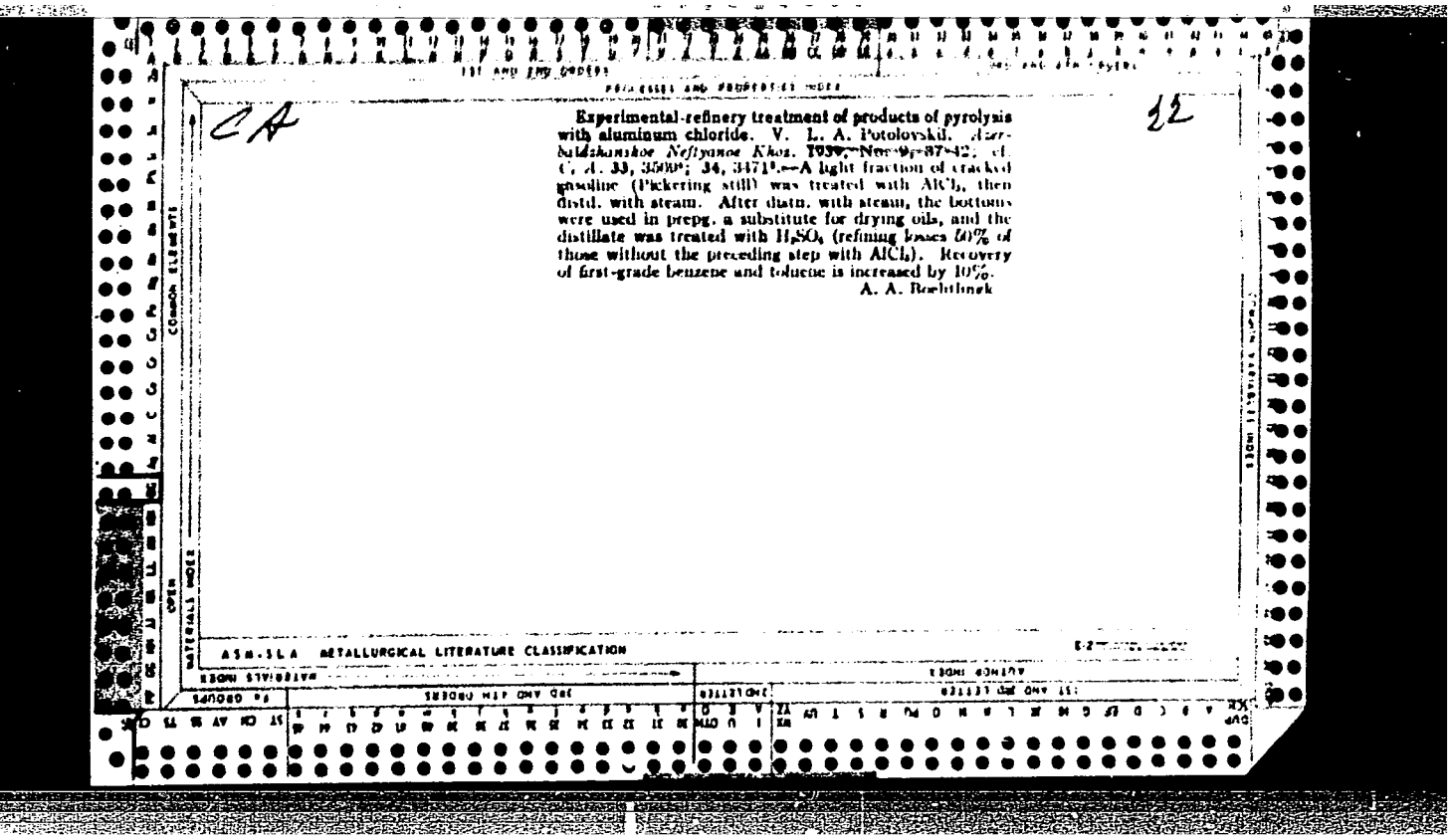
PROCESSES AND PROPERTIES INDEX

Thermal dehydrogenation of ethane to ethylene. I. Pozdeevskii and A. Atal'yan. *Neftyanoe Khozyaistvo* 1936, No. 4, 42-50. Ethane was heated at 725° to 900°. According to the expts. described in detail the following conversions were noted. In 1 passage of ethane through the heater at 875-900° with 0.00 sec. exposure in the reaction zone the highest abs. yield of C_2H_4 was 58-62% (by wt.). Here side reactions were of a subordinate nature. Thus, 4.7% of CH_4 was formed and the C_2H_6 decompn. amounted to 76-80%. With increase of the contact time to 0.3-0.6 sec. at 850° up to 80% of the C_2H_6 is decomposed, yielding in addn. to C_2H_4 10% CH_4, 2% C_2H_2 and 5% higher hydrocarbons. The yield of C_2H_4 at the same duration of exposure at 775° is 10%, while 5% of CH_4, 2% of higher hydrocarbons and 0.5% [illegible]

[illegible] ... dehydrogenation of C_2H_6 to C_2H_4 ... and higher does not follow the classical laws of ... of chem. reactions. A short exposure of C_2H_6 and the products of its decompn. to the reaction vessel has little effect on the stability of the products. C_2H_6 should be pyrolyzed in 2 stages. In the 1st stage C_2H_6 is heated to ... and in the 2nd it is rapidly passed through a high temp. stage. High pressures are not recommended because of the reversibility of the reaction. Twenty-four references.

A. A. Boehtlingk

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION



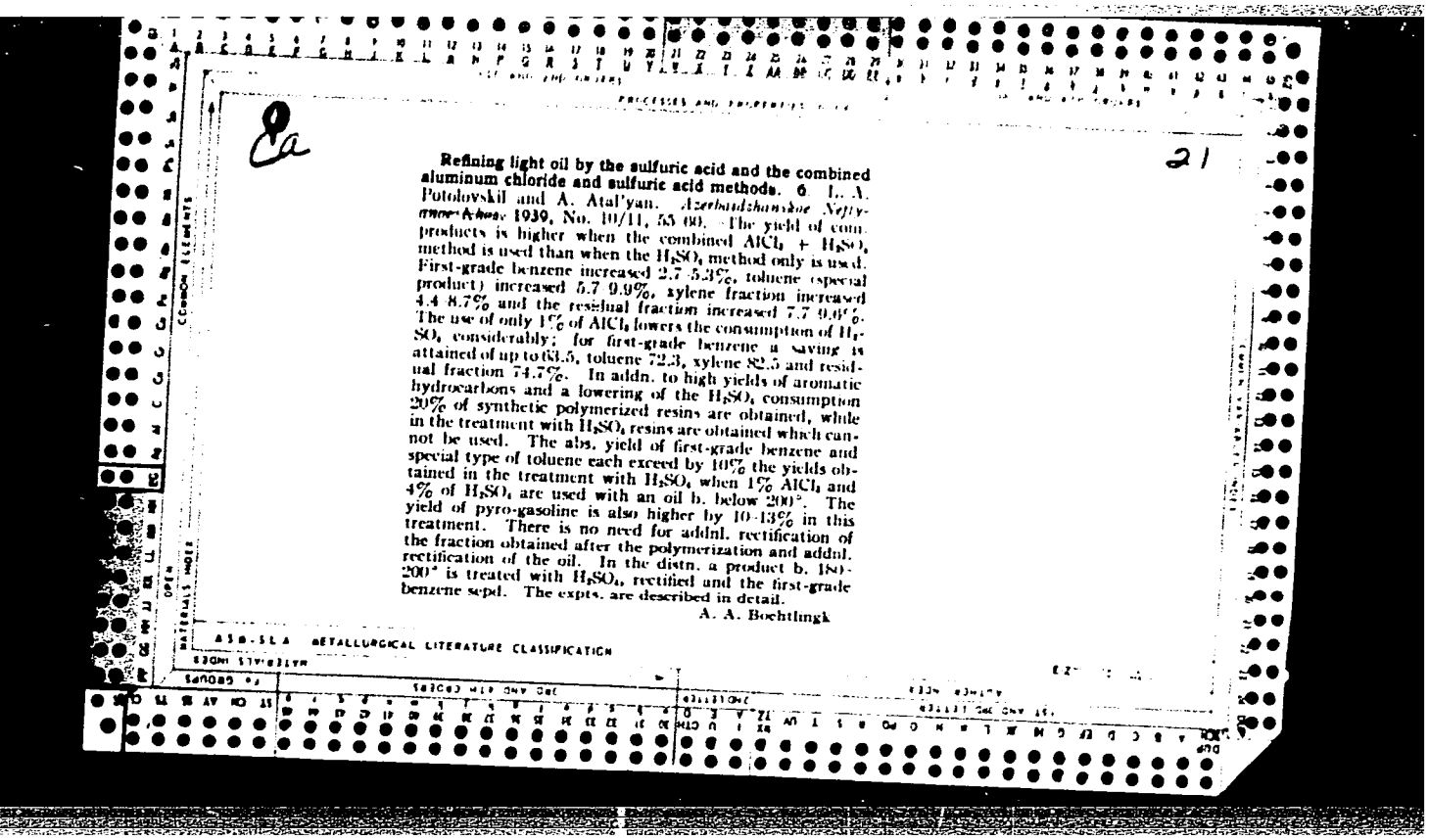
CA

12

Experimental-refinery treatment of products of pyrolysis with aluminum chloride. V. L. A. Potolovskii. *Azerbaidzhanskoe Neftyanoe Khoz.* 1939, No. 9, 87-92; cf. C. A. 33, 3509; 34, 3471.—A light fraction of cracked gasoline (Pickering still) was treated with $AlCl_3$, then distd. with steam. After distn. with steam, the bottoms were used in prepg. a substitute for drying oils, and the distillate was treated with H_2SO_4 (refining losses 10% of those without the preceding step with $AlCl_3$). Recovery of first-grade benzene and toluene is increased by 10%.

A. A. Rochlinsk

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION



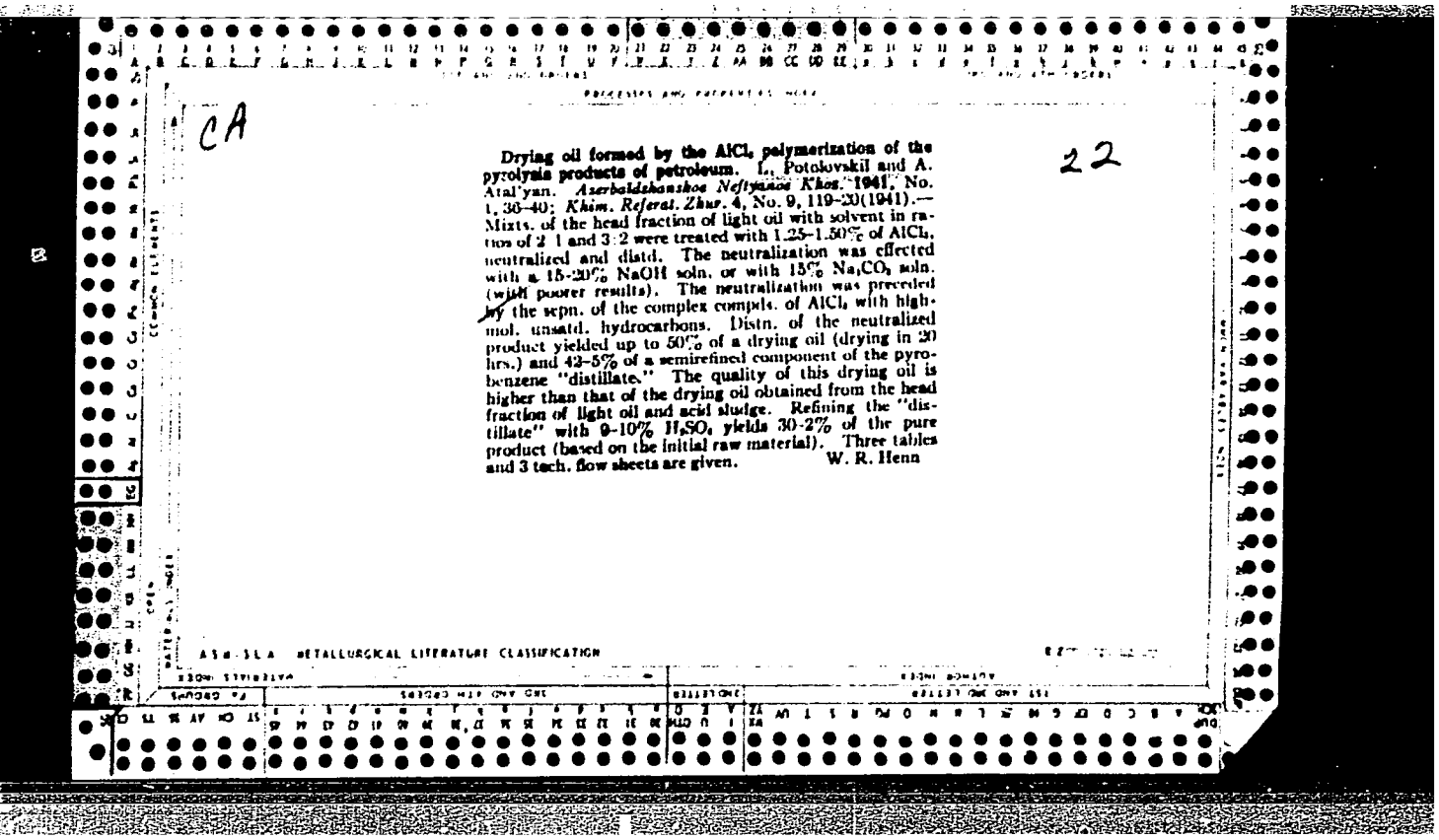
8a

21

Refining light oil by the sulfuric acid and the combined aluminum chloride and sulfuric acid methods. 6 L. A. Pototovskii and A. Atal'yan. *Azerbaidzhanskoe Neftyanoe Khoz.* 1939, No. 10/11, 55-60. The yield of com. products is higher when the combined $AlCl_3$ + H_2SO_4 method is used than when the H_2SO_4 method only is used. First-grade benzene increased 2.7-5.3%, toluene (special product) increased 5.7-9.9%, xylene fraction increased 4.4-8.7% and the residual fraction increased 7.7-9.0%. The use of only 1% of $AlCl_3$ lowers the consumption of H_2SO_4 considerably; for first-grade benzene a saving is attained of up to 83.5, toluene 72.3, xylene 82.5 and residual fraction 74.7%. In addn. to high yields of aromatic hydrocarbons and a lowering of the H_2SO_4 consumption 20% of synthetic polymerized resins are obtained, while in the treatment with H_2SO_4 resins are obtained which cannot be used. The abs. yield of first-grade benzene and special type of toluene each exceed by 10% the yields obtained in the treatment with H_2SO_4 when 1% $AlCl_3$ and 4% of H_2SO_4 are used with an oil b. below 200°. The yield of pyro-gasoline is also higher by 10-13% in this treatment. There is no need for addnl. rectification of the fraction obtained after the polymerization and addnl. rectification of the oil. In the distn. a product b. 180-200° is treated with H_2SO_4, rectified and the first-grade benzene sepd. The expts. are described in detail.

A. A. Boehtlingk

A58-51A METALLURGICAL LITERATURE CLASSIFICATION



CA

22

Drying oil formed by the $AlCl_3$ polymerization of the pyrolysis products of petroleum. L. Potolovskii and A. Atal'yan. *Azerbaidzhanskoe Neftyanoe Khoz.* 1941, No. 1, 36–40; *Khim. Referat. Zhur.* 4, No. 9, 119–20(1941).—Mixts. of the head fraction of light oil with solvent in ratios of 2:1 and 3:2 were treated with 1.25–1.50% of $AlCl_3$, neutralized and distd. The neutralization was effected with a 15–20% NaOH soln. or with 15% Na_2CO_3 soln. (with poorer results). The neutralization was preceded by the sepn. of the complex compds. of $AlCl_3$ with high-mol. unsatd. hydrocarbons. Distn. of the neutralized product yielded up to 50% of a drying oil (drying in 20 hrs.) and 42–5% of a semirefined component of the pyrobenzene "distillate." The quality of this drying oil is higher than that of the drying oil obtained from the head fraction of light oil and acid sludge. Refining the "distillate" with 9–10% H_2SO_4 yields 30–2% of the pure product (based on the initial raw material). Three tables and 3 tech. flow sheets are given.

W. R. Henn

A S M - S L A METALLURGICAL LITERATURE CLASSIFICATION

POTOLOVSKIY, L. A.

58/49T29

USSR/Chemistry - Hydrocarbons Gases

Jun 49

"Apparatus for the Rectification of Hydrocarbon Gases at Low Temperatures," B. B. Kaminer, L. A. Potolovskiy, Cen Inst of Avn Fuels and Oils, 5 pp

"Zavod Lab" Vol XV, No 6

Apparatus was developed by Cen Inst of Avn Fuels and Oils in cooperation with Chem Dept, Acad Sci USSR. It is capable of working within the temperature limits of -200° and +500°. Construction is simple and parts can be replaced

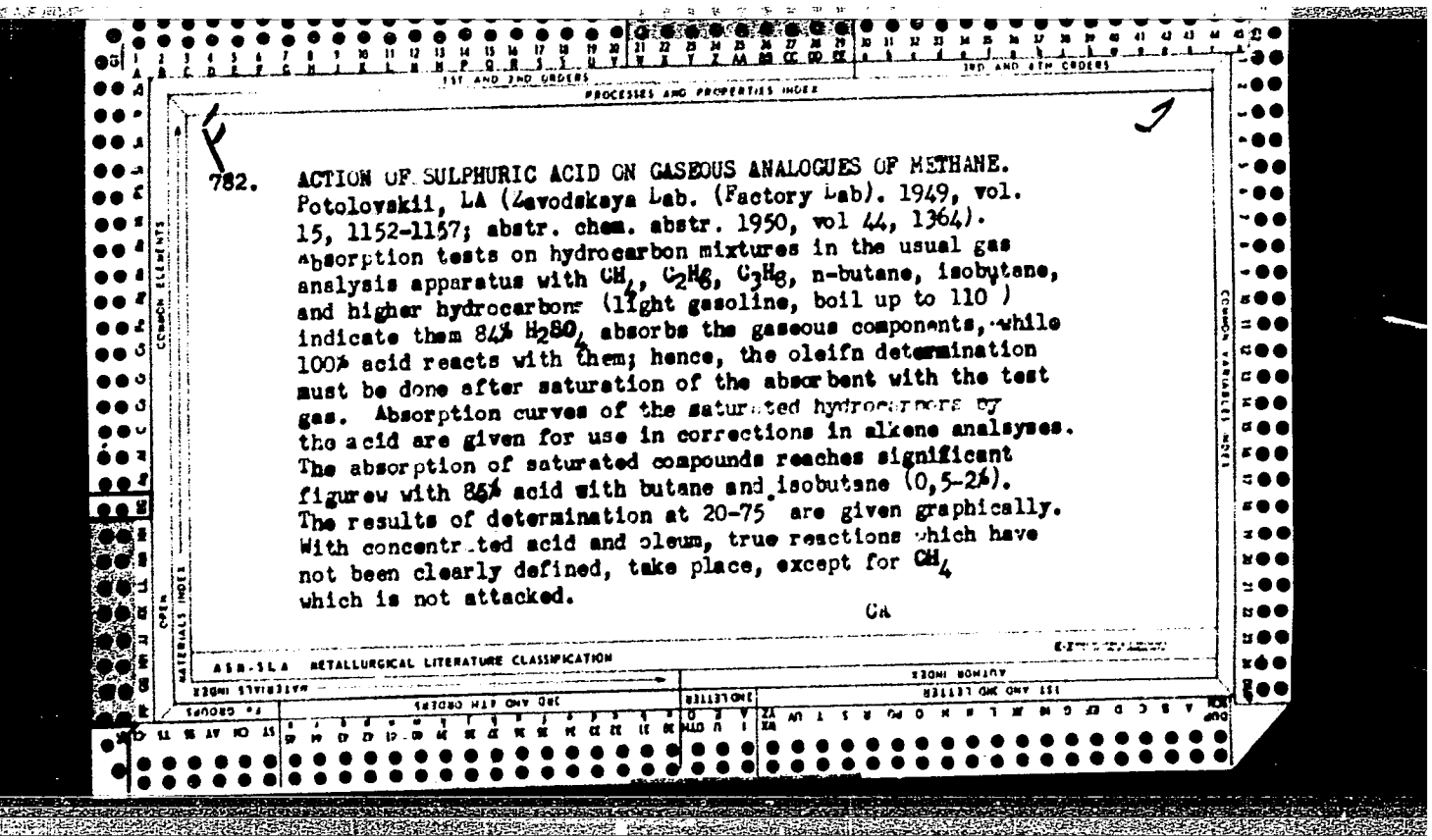
58/49T29

USSR/Chemistry (Contd)

Jun 49

without special equipment. Only the manometer contains mercury, thus giving this new apparatus an advantage over the old apparatus which had mercury in the manometer, pump, and boiling vessel. Pressure is kept constant.

58/49T29



782. ACTION OF SULPHURIC ACID ON GASEOUS ANALOGUES OF METHANE. Potolovskii, LA (Zavodskaya Lab. (Factory Lab). 1949, vol. 15, 1152-1157; abstr. chem. abstr. 1950, vol 44, 1364). Absorption tests on hydrocarbon mixtures in the usual gas anslysis apparatus with CH_4, C_2H_6, C_3H_8, n-butane, isobutane, and higher hydrocarbons (light gasoline, boil up to 110) indicate them 84% H_2SO_4 absorbs the gaseous components, while 100% acid reacts with them; hence, the oleifn determination must be done after saturation of the absorbent with the test gas. Absorption curves of the saturated hydrocarbons by the acid are given for use in corrections in alkene analsyses. The absorption of saturated compounds reaches significant figurew with 86% acid with butane and isobutane (0,5-2%). The results of determination at 20-75° are given graphically. With concentrated acid and oleum, true reactions which have not been clearly defined, take place, except for CH_4 which is not attacked.

CA

POTOLOVSKIY, L.A.

USSR/Chemistry - Catalytic cracking

Card 1/1 Pub. 151 - 7/38

Authors : Potolovskiy, L. A., and Spektor, G. S.

Title : Cracking of normal paraffinic hydrocarbons in the presence of aluminum chloride. Part 1.- Cracking of n-heptane and n-nonane

Periodical : Zhur. ob. khim. 24/2, 225-231, Feb 1954

Abstract : The effect of molecular weight of basic normal paraffinic hydrocarbons and cracking conditions in the presence of $AlCl_3$ on the composition of final cracking products was investigated. The products obtained consisted of greater numbers of isomers with tho methyl group in the second carbon atom and lesser quantities of hydrocarbons with the methyl group in position 3, as well as branched isomers with two methyl groups in 2,3 and 2,4 positions nd isomers with quaternary carbon atom. The content of the gaseous cracking products is described. The advantages of HCl in the role of cracking reaction accelerator are discussed. Nineteen references: 7-USSR; 4-USA; 2-English; 2-German and 4-French (1881-1947). Tables; drawing.

Institution : Central Scientific Research Institute of Aviation Fuels and Lubricants

Submitted : May 16, 1953

POTOLOVSKIY, L.A.

USSR/Chemistry - Catalytic cracking

Card 1/1 : Pub. 151 - 6/37

Authors : Potolovskiy, L. A., and Spektor, G. S.

Title : Cracking of normal paraffinic hydrocarbons over $AlCl_3$. Part 2.-Cracking of n-hexadecane

Periodical : Zhur. ob. khim. 24/3, 434-439, Mar 1954

Abstract : The products (isomers) obtained from the cracking of isoparaffinic hydrocarbons (n-hexadecane) over an $AlCl_3$ catalyst are tabulated. The amount of $AlCl_3$ and the presence of HCl at a 200-250° temperature range were found to have no effect on the composition of the final n-hexadecane cracking products but are rather factors determining the rate of reaction. The composition of the gaseous cracking products is described. It was established that the hydrocarbons, separated from residues formed during the cracking of n-heptane, n-nonane and n-hexadecane over $AlCl_3$ catalysts are highly unsaturated compounds. The similarity in the composition of the cracking products confirms the analogy in the mechanism of decomposition of n-paraffinic hydrocarbons of various molecular weight. Seven references: 5-USSR; 1-French and 1-German (1927-1954). Tables.

Institution: Central Institute of Aviation Fuels and Lubricants

Submitted : May 16, 1953

POTOLOVSKIY, L.A.

1720. The use of the instrument Ts.I.A.T.I.M.-51-V for the analysis of gaseous hydrocarbons by low-temperature rectification. L. A. Potolovskii, E. M. Barinova and V. N. Ivanenko. Report of Symposium: "Metody Issledov. Neft. Nefteprodukt., M., Gostoptekhizdat," 1955, 184–194; *Ref. Zhur., Khim.*, 1956, Abstr. No. 30,128.—The instrument developed is an improved modification of the semi-automatic Ts.I.A.T.I.M.-51 for the analysis of gaseous hydrocarbons by rectification at low temp. It preserves the basic constructive advantages over other instruments with similar aims—(*a*) the collection of fractions in graduated receivers with salt soln. allows them to be easily removed for analysis, since the fractions do not have to be pumped out with a Topler pump as in other types of instrument; (*b*) the graduated receivers allow an additional measurement (besides the automatically traced diagrams) of the quantity of fractions obtained on distillation, which increases the reliability of the analytical results; (*c*) mercury is used in the instrument only in manometers, which is a great advantage as compared with other automatic and semi-automatic instruments. C. D. KOPKIN

3/5

AID P - 3578

Subject : USSR/Chemistry

Card 1/1 Pub. 152 - 15/20

Authors : Potolovskiy, L. A. and G. S. Spektor

Title : Cracking of technical grade paraffin

Periodical : Zhur. prikl. khim., 28, 7, 766-772, 1955

Abstract : The main products resulting from cracking of paraffins in the presence of $AlCl_3$ are isoparaffins of low molecular weight. The cracking of Groznyy paraffin yielded isobutane (19-32%), isopentane (20-24%), isohexanes (11-16%), and isoheptanes (4-9%). Six tables, 1 diagram, 8 references, all Russian (1881-1954).

Institution : None

Submitted : 0 29, 1953

POTOLOVSKIY, L. A.

BLAGOVIDOV, I.F.; POTOLOVSKIY, L.A.; DOLADUGIN, A.I.

Manufacture of alkylaryl sulfonates (sulfonol-np) from propylene polymers. Khim. i tekh.topl. i masel no.8:4-13 Ag '57. (MIRA 10:10)

1.Vsesoyuznyy nauchno-issledovatel'skiy institut po pererabotke nefti i gaza i polucheniyu iskusstvennogo zhidkogo topliva.
(Sulfonic acids) (Propene) (Cleaning compounds)

AUTHORS: Kogan, P. S. and Potolovskiy, L. A. 65-1-6/14

TITLE: High Temperature Pyrolysis of Ethane Fractions to Obtain Ethylene. (Vysokotemperaturnyy piroliz etanovoy fraktsii s tsel'yu polucheniya etilena).

PERIODICAL: Khimiya i Tekhnologiya Topliv i Masel,1958,Nr.1.pp.25-32. (USSR).

ABSTRACT: Experiments were carried out to ascertain optimal conditions for the pyrolysis of an ethane fraction (which was separated from the gases obtained during the pyrolysis of kerosene at temperatures varying between 800°C - 950°C and at atmospheric pressure) in order to achieve maximum yields of ethylene. The influence of the metal of the tube furnace on the processes of pyrolysis and coke formation as well as the influence of concentration of the propylene and ethane fractions on the degree of conversion of ethane and the yield of ethylene were also investigated. The experiments were carried out on a continuous flow laboratory apparatus. The reaction tubes were made of quartz, chrome-nickel steel ЭЯ1Т (17.3% Cr, 10.2%Ni) and iron-chrome-aluminium alloy No.2 (23-27% Cr., 4.5-7% Al). The experiments in the quartz tubes were carried out to obtain a standard for comparing

Card 1/4

High Temperature Pyrolysis of Ethane Fractions to Obtain Ethylene.

the catalytic action of the metal of the tubes on the pyrolysis process. A diagram of an experimental apparatus is shown in Fig.1. The tests were carried out at 800°C, 830°C and 900°C, and varying residence times of the products in the reaction zone. For each of the given temperatures the optimal time of maintaining the products in the reaction zone were established and the rate of supply of the ethane fraction at which the highest yield of ethylene could be obtained. Data on the composition of the pyrolysis gases and yields of ethylene at optimal residence times of the products in the reaction zone for each temperature are given in Table 1, which shows that by increasing the temperature of the pyrolysis from 800°C to 900°C the degree of conversion of ethane increases from 64.7% to 73.6% and the concentration of ethylene in the pyrolysis gases increases from 34% to 37.8%/volume. The yield of ethylene for the circulated fraction increases from 51.7% to 62%. Results obtained when carrying out the pyrolysis in a tube made of alloy No.2 show that at 950°C and at an optimal residence time of 0.017 seconds the degree of conversion of ethane increases up to 87.2% and the

High Temperature Pyrolysis of Ethane Fractions to Obtain Ethylene.

composition of ethane to carbon methane and hydrogen. When the concentration of propylene is increased from 4.7% to 12% (Table 4) the degree of conversion of ethane is slightly decreased from 85.4% to 80.3%. On the basis of results obtained during the experiments, it can be assumed that at 900°C and at atmospheric pressure propylene acts as an inhibitor. The reduced inhibiting action of propylene on the rate of dehydrogenation of ethane under the above described condition is connected with combining of active radicals ($H.CH_3$) with the hydrogen atom of a methyl group of propylene and the formation of the H_2 and CH_4 molecules and an inactive allyl type radical. There are 4 Tables, 2 Figures and 21 References: 1 Belgian, 1 Czech, 7 English and 12 Russian.

AVAILABLE: Library of Congress.

Card 4/4

SOV/65-58-6-7/13

AUTHORS: Potolovskiy, L. A; Blagovidov, I. F; Kostikin, L. I.

TITLE: The Synthesis of Na-Isodecylbenzene Sulphonate (Sulphanole NP-2) on the Basis of Amylene Dimers. (Sintez izodetsilbenzolsul'fonata natriya (sul'fonola NP-2) na osnove dimerov amilenov).

PERIODICAL: Khimiya i Tekhnologiya Topliv i Masel, 1958, Nr.6. pp. 33 - 41 (USSR).

ABSTRACT: The alkylation of benzene with amylene dimers when using sulphuric acid and aluminium chloride as catalyst, and also the conditions for sulphonating isodecylbenzenes with oleum, neutralisation of alkylbenzene sulphonic acids and the physico-chemical properties of sodium alkylbenzene sulphonates and their activity as detergents was investigated. During the alkylation, the fractions boiling between 120° - 180°C (Refs. 8, 9, and 10) of various samples of technical diisoamylenes (Ref.2) were used. These were obtained by polymerising pentane-amylene fractions of cracking products in an industrial polymerising unit of the GrozNII Cracking Plant. The physico-chemical properties of the fractions are listed. The composition and structure of the olefins was defined by infra-red spectral analysis (Table 1); purified aluminium chloride GOST 4458-48) and sulphuric acid were used as catalysts.

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The Synthesis of Na Isodecylbenzene Sulphonate (Sulphanol NP-2) on the Basis of Amylene Dimers.

The optimal molar ratio of C_6H_6: iso-$C_{10}H_{20}$ was found to be 7.0 - 7.5 (Fig.1). The yield of the fraction 212° - 320°C was 112%; the optimal quantity of aluminium chloride catalyst was 0.1 mol - 7.5 mol of diisoamylene, and the optimum reaction temperature = 30°C (Fig.2). The yield of various fractions is given. When using diisoamylenes containing 0.89% of sulphur compounds the yield of the fraction 212°- 280°C was 61%, and the alkylation product had a high bromine number (15). The reaction was carried out at 5° - 7° and 18° - 20° when sulphuric acid was used as catalyst (Table 2). Yields were 98.1% and 79.2% respectively. The influence of the amount of acid on the yield of alkylbenzenes and on the bromine number of fractions 180° - 350°C during alkylation with sulphuric acid at 15° - 17°C (Fig. 3). The highest yield of isodecylbenzenes was obtained when 96% - 98% sulphuric acid was used. In this case the yield = 98.1%. It was found that when using H_2SO_4 a lower yield of alkylbenzene fraction and a higher bromine number was obtained than when using $AlCl_3$. Results of infra-red spectral analyses of the alkylbenzene fractions are given in Table 3. The tests

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on the sulphonation of isodecylbenzenes with oleum and neutralisation of the sulphonic acids were carried out at 35° - 40°C while adding oleum for 20 - 30 minutes, and subsequent mixing for 120 minutes. The sulphonic acids were neutralised with a 25% - 30% solution of NaOH, the temperature of neutralisation did not exceed 45° - 50°C. Fig.4: the quantity of oleum necessary for sulphonating the fraction 212°- 320°C of isodecylbenzenes depending on the content of SO_3 in oleum. Industrial experiments carried out in the plant VNII NP confirm the data obtained during laboratory tests. The physico-chemical properties of Na isodecylbenzene sulphonate were determined in VNII NP and in Leningrad in the All-Union Research Institute for Oils and Fats (VNIIZh) (Vsesoyuznyy nauchno-issledovatel'skiy institut zhirov (VNIIZh)) (Ref.13). Test results are given in Tables 4 and 5. The detersive action of isodecylbenzene sulphonates in hard water at 40°C and at 0.25% concentration of the active substance was compared with the detersive action of soap under identical conditions (Table 6). It was found that Sulphanole NP-2 could be used as detergent. Its detersive properties

The Synthesis of Na Isodecylbenzene Sulphonate (Sulphanole NP-2) On the Basis of Amylene Dimers.

in the pure form, at 0.25 concentration in the solution = 111% compared with the detergent properties of soap and 246% when mixed with 50% sodium carbonate. Sulphanole NP-2, prepared with $AlCl_3$, has much higher detergent properties than Sulphanole NP-2, prepared with H_2SO_4. Analogous results were obtained by the Central Research Institutes TsNIIshersti and TsNIIshelka. There are 6 Tables, 4 Figures, 13 References: 4 English, 8 Soviet, 1 German

ASSOCIATION:VNII NP

POTOLOVSKIY, L.A.; KOSTIKIN, L.I.

Synthesis of sodium isodecyl toluene sulfonate on a base of anylene dimers. Trudy VNII NP no. 9:170-176 '63. (MIRA 17:6)

IVANOVA, Ye.K.; POTOLOVSKIY, L.A.; DOLADUGIN, A.I.

Continuous alkylation of benzene with olefins obtained in the thermal cracking of paraffin. Trudy VNII NP no. 9:241-255 '63. (MIRA 17:6)

MARTYNOVA, N.V.; DINTSES, A.I.; POPOVA, L.A.; POTOLOVSKIY, L.A.

Developing an industrial method for the production of polyisobutylene as a viscous additive to petroleum oils. Trudy VNII NP no. 9:68-80 '63. (MIRA 17:6)

POTOLOVSKIY, L.A.; DOLADUGIN, A.I.; BLAGOVIDOV, I.F.

Synthesizing sodium alkylbenzene sulfonate (sulfonol NP-1) on a base of propylene polymers. Trudy VNII NP no. 9:110-120 '63. (MIRA 17:6)

CHKHEIDZE, G.Ya., [illegible], L.A., [illegible], A.I., [illegible], L.N., ZHAROV, G.A.

Polymerization of propylene in order to obtain a primer fraction (nonylenes) as a basic product. Trudy VNII NP no. 9: 224-240 '63. (MIR 17:6)

ACCESSION NR: AR4036319 S/0081/64/000/004/P039/P040

SOURCE: Referativny*y zhurnal. Khimiya, Abs. 4P277

AUTHOR: Marty*nova, N. V.; Dintses, A. I.; Popova, L. A.; Potolovskiy, L. A.

TITLE: Development of an industrial method for the production of polyisobutylene, binding additive to petroleum oils

CITED SOURCE: Tr. Vses. n.-i. in-t po pererabotke nefti, vy*p. 9, 1963, 68-80

TOPIC TAGS: petroleum, petroleum additive, oil additive, polyisobutylene, polymerization, isobutylene polymerization, mineral oil, polymerization catalyst

TRANSLATION: Laboratory experiments on the polymerization of isobutylene (the butan-butylene fraction, containing 12-30% isobutylene, was used as the raw material), designed to obtain polyisobutylene with a molecular weight of 15-20,000 which could be used as a binding additive to mineral oils, were performed in the presence of an $AlCl_3$ catalyst (2% of the isobutylene) in a 1-liter reaction vessel with a stirrer of the propeller type at temperatures of -35 to -45C. The relationship between the molecular weight of polyisobutylene and the content of isobutylene in the raw material, the ratio of isobutylene to n-butylene in the raw material, the content of C_5 hydrocarbon in the raw

Card 1/2

SOV/65-58-12-5/18

AUTHORS: Kogan, P. S. and Potolovskiy, L. A.

TITLE: The Effect of Water Vapour on the Pyrolysis of an Industrial Ethane Fraction When Preparing Ethylene (Izucheniye vliyaniya vodyanogo para na piroliz tekhnicheskoy etanovoy fraktsii s tsel'yu polucheniya etilena)

PERIODICAL: Khimiya i Tekhnologiya Topliv i Masel, 1958, Nr 12, pp 22 - 26 (USSR)

ABSTRACT: These investigations were carried out at 900°C, the residence time in the reaction zone being 0.053-0.058 seconds and at atmospheric pressure. The following ratios were determined: ethane fraction:water vapour equalled 1:0.05; 1:0.1; 1:0.25 and 1:0.5. The tests were carried out on a laboratory apparatus in a reaction tube which was made of the iron-chrome-aluminium alloy No.2. The reaction tube had a diameter of 12 mm and its length equalled 900 mm. This was placed into a horizontal tube kiln containing elements made of the same alloy. The apparatus, method of analysis of the initial fraction and of the pyrolysis gases etc. were described by P. S. Kogan (Ref.11).

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The Effect of Water Vapour on the Pyrolysis of an Industrial Ethane Fraction When Preparing Ethylene

The effect of the amount of water vapour on the degree of conversion of ethane is shown in Table 1, and the effect of the water vapour on the yield of ethylene and the composition of the pyrolysis gases in Figs. 1 and 2. In these two figures it is also shown that when the ratio vapour-ethane fraction equals 0.05:0.1 the concentration of ethylene in gases does practically not change in comparison to the pyrolysis without water vapour and equals approximately 35% of the volume. On increasing this ratio the concentration of ethylene decreases to 29% of the volume, the content of carbon monoxide increases from 0.2 to 5.51% and of hydrogen from 40 to 45.9%. The acetylene content remains practically constant. Further experiments were carried out when the ratio of vapour-ethane fraction equalled 0.25: & 0.5. These experiments were carried out to decrease the coke formation. Data on the effect of water vapour on coke formation is given in Table 2. The yield of coke is decreased from 0.99 to 0.09%. The dependence of these

 results on the length of the experiment was tested

The Effect of Water Vapour on the Pyrolysis of an Industrial Ethane Fraction When Preparing Ethylene

(Table 3) and it can be observed that the composition of the pyrolysis gases and the yield of ethylene are only slightly affected and remain practically constant. There are 3 Tables, 2 Figures and 12 References: 1 Belgium, 4 English, 3 German and 4 Soviet.

POTOLOVSKIY, L.A.

: p. 2, 12

PHASE I BOOK EXPLOITATION SOV/4659

Osnovy tekhnologii neftekhimicheskogo sinteza (Fundamentals of Synthesis Technology in Petroleum Chemistry) Moscow, Gostoptekhizdat, 1960. 852 p. 3,800 copies printed.

Eds.: Dintses, Arkadiy Il'ich, Professor, and Lev Aleksandrovich Potolovskiy, Professor; Executive Ed.: L.A. L'vova; Tech. Ed.: E.A. Mukhina.

PURPOSE: This book is intended for engineers and chemists of petroleum refineries and chemical plants, for councils of the national economy, planning organizations and scientific research institutes engaged in chemical processing and large-scale utilization of petroleum stock for the production of synthetic products.

COVERAGE: The book describes important commercial methods of producing hydrocarbon petroleum and gas stock and coal stock for the manufacture of alcohols, aldehydes, ketones, acids, detergents, synthetic fibers, and synthetic rubber. Flow sheets are included, and the basic equipment of the petrochemical industry is described. The physicochemical properties and use of intermediate and end synthetic products are also described. The state of the petrochemical industry outside the USSR and prospects for its development are covered. No personalities are mentioned. References follow each chapter.

Card 1/21

KHRULEV, M.V.; KOGAN, P.S.; POTOLOVSKIY, L.A.

High temperature pyrolysis of theethane fraction in pipe furnaces.
Khim.i.tekh.topl. i masel 5 no.6:13-17 Je '60. (MIRA 13:7)

(Petroleum—Refining) (Ethane)

MUCHINSKIY, David Yakovlevich; POTOLOVSKIY, Lev Aleksandrovich; EMISHERLOVA, G.M., ved. red.

[Polymerization of propylene; experience in the industrial production of low-molecular olefins] Polimerizatsiia propilena; opyt promyshlennogo proizvodstva nizkomolekuliarnykh olefinov. Moskva, Khimiia, 1964. 90 p. (MIRA 17:12)

L 6870-65 EWT(m)/EPF(c)/EWP(j)/T Pc-4/Pr-4 ASD(m)-3/AFETR RM
ACCESSION NR: AR4041677 S/0081/64/000/007/P020/P021

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SOURCE: Ref. zh. Khimiya, Abs. 7P143

AUTHOR: Chkheidze, O. Ya., Potolovskiy, L. A.; Doladugin, A. I.; Korshunova, L. N.; Zharov, G. A.

TITLE: Polymerization of propylene to obtain a trimeric fraction (nonylenes) as a basic product

CITED SOURCE: Tr. Vses. n.-i. in-t po pereabotke nefti, vy*p. 9, 1963, 228-240

TOPIC TAGS: polymerization, propylene, trimerization, thermal cracking, oil

TRANSLATION: Trimerization of propylene was produced on experimental installation with catalyst H_3PO_4 on kieselguhr (TU 05 - 51). Propane-propylene fraction of gases of thermal cracking of black oil containing 22 - 26% propylene by weight with additional propane-propylene fraction of gases of kerosene pyrolysis was the raw material. The results of polymerization of propylene in trimers with recirculation

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and without recirculation of dimers are given; the material balances of both processes are compared. Total transformation of propylene and yield of fractions of polymerizate depend comparatively little on propylene content in initial raw material. At 200° total transformation of propylene during change of volume speed from 1.0 to 2.5/hour changes within limits of 88 - 60%; at 220° -- within limits of 92 - 75%. Yield of trimeric fraction at 200° without recirculation of dimers is 30 - 35% (at volume velocity of 2.0 - 2.5/hour); at 220 degrees, other conditions being equal, it is 28 - 32%. Upon returning into the process ~50 - 60% dimers of propylene, transformation of propylene is practically constant (2 - 5% higher than during work without recirculation). During further increase of quantity of recirculate, transformation of propylene is lowered. Maximum quantity of dimer fraction which can be returned into the process for recirculation is 50% for propylene; in this the yield of trimeric fraction (125 - 150°) is ~50% for initial propylene and 60 - 70% for the reacting propylene; this confirms the expediency of carrying out the process at 200°. Yield of trimeric fraction for reacting propylene increases with increase of volume velocity of supply of raw material. During removal of all sulfurous compounds from the initial propane-propylene fraction, the trimeric fraction obtained in process of polymerization

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of propylene satisfies requirements presented to raw material for synthesis of alcohols used as materials for preparation of plasticizer. Under optimum conditions of propylene trimerization, the yield of tetra- and pentamers of propylene is ~50% of yield of propylene trimers.

SUB CODE: OC, GC ENCL: 00

Card 3/3

LAPIN, P.I.; KONDRATOVICH, N.Ye.; YUR'YEV, Yu.I.; ANTSIFEROVA, T.S.; GERNET, G.M.; POTOLOVSKIY, N.I., red.; MEL'NIKOVA, M.S., red. izd-va; PARAKHINA, N.L., tekhn. red.

[Manual on the assembly, operation, maintenance and repair of the equipment of sawmills and woodworking enterprises] Spravochnik po montazhu, ekspluatatsii i remontu oborudovaniia lesopil'nykh i derevoobrabatyvaiushchikh predpriiatii. Moskva, Goslesbumizdat, 1961. 443 p. (MIRA 14:11)
(Woodworking machinery) (Sawmills—Equipment and supplies)

TARASOV, Vladimir Mikhaylovich; POTOLOVSKIY, N.N., red.; MEL'NIKOVA, M.S., red. izd-va; VDOVINA, V.M., tekhn. red.

[Manual electric and pneumatic tools in the woodworking and associated industries] Ruchnoi elektrifitsirovannyi i pnevmaticheskii instrument v derevoobrabatyvaiushchem i soputstvuiushchikh proizvodstvakh; spravochnoe rukovodstvo. Moskva, Goslesbumizdat, 1961. 95 p. (MIRA 15:3)
(Power tools)

POTOMSKY V.

H

CZECHOSLOVAKIA/Chemical Technology. Chemical Products and Their Application. Treatment of Solid Mineral Fuels.

Abs Jour: Ref Zhur-Khin., No 13, 1958, 44514.

Author : Riedl R., Medricky Z., Potomsky V.
Inst :
Title : Coking of Coal Tar Pitch.

Orig Pub: Paliva, 1957, 37, No 12, 406-411.

Abstract: Experiments on coking of coal tar pitch in cylindrical steel vessels placed in a coking oven in which was conducted its industrial coking for the production of electrode coke; the vessel held 60 kg of pitch comminuted to a particle size of less than 40 mm; the experiments were conducted at a temperature of about 1080°. Determinations were

Card : 1/2

3

MOHOS, J. Zoltan, dr.; POTONAY, Janos, dr.

Immune hemolysis following smallpox vaccination with lymphomonocytic reactions simulating infectious mononucleosis. Orv. hetil. 105 no.45:2141-2143 8 N '64.

1. Esztergomi Varosi Tanacs Korhaza, Verellato es Gyermekosztaly.

POTONDI, A.

4639. **Effect of cortisone and deoxycorticosterone acetate [DOCA] on the rate of disappearance of histamine from blood in adrenalectomised rats.** L. Csalay, K. Iványi, and A. Potondi *Acta physiol. Acad. Sci. hung.*, 1954, 6, 171—176 (Pathophysiol. Inst. Med. Univ., Budapest, Hungary).—2½ min. after an i.v. injection of histamine, 3 to 4 times as much histamine is found in the blood of adrenalectomised rats as in normal ones. Treatment with DOCA has no effect, but with cortisone, a 60% restoration of the normal rate of disappearance is attained. Substitutional therapy with cortisone and DOCA results in an 85% restoration of the normal rate. (German)

A. B. L. Beznák.

2

Med

KENYERES, Imre, dr.; POTONDI, Andras, dr.; SOMOGYI, Endre, dr.

Fatal accidents in children in Budapest and Pest regions from 1957 to 1959. Orv. hetil. 102 no.40:1879-1882 1 O '61.

1. Budapesti Orvostudomanyi Egyetem, Igazsagugyi Orvostani Intezet.

(ACCIDENTS in inf & child)

POTONDI, Andras; GABOR, Istvan

Twice-ruptured aneurysm of the base of the brain. Ideg. szemle 13 no.4:103-106 Ap '60.

1. Budapesti Orvostudomanyi Egyetem Igazsagugyi Orvostani Intezetenek (Igazgato: Dr. Okros, Sandor egyetemi tanar) kozlemenye.
(CEREBRAL ANEURYSM compl.)

POTONDI, Andras, dr.

Malignant angioblastoma of the pia mater ("Lindau's disease").
Ideg. szemle 14 no.1:1-6 Ja '61.

1. A Budapesti Orvostudomanyi Egyetem Igazsagugyi Orvostani Intezetenek (Igazgato: dr. Okros Sandor egyetemi tanar) kozlemenye.
(BRAIN NEOPLASMS case reports)
(PIA MATER neopl)
(ANGIOSARCOMA case reports)

POTOUDI A.

HUNG.

Action of cortisone and deoxycorticosterone acetate (DOCA) on histamine detoxication by adrenalectomized animals. L. Csalay, K. Iványi, and A. Potoudi. *Acta Physiol. Acad. Sci. Hung.* 6, 471–8(1955)(in German).—Two and a half min. after histamine (2 mg./100 g.) injection into adrenalectomized rats, the histamine blood level was 5.8 γ/ml. in contrast to 1.5 γ/ml. in control animals. A combination of cortisone and DOCA (1.8 and 1.2 mg./100 g., resp.), administered previously, promoted an 85% reduction in blood histamine level of the exptl. animals. W. H. F.